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THE OLD YEAR IS GONE. THE NEW YEAR IS COME

BY GEORGE F. BUTLER, M. D.

THE months past have had their clouds and sunshine, their storms and calms. The riot and perfume and loveliness of summer have been in your soul, but storms have swept it, and black clouds blotted out the sun, and life was still and gray and desolate. Have you been querulous because of the stormy days? Remember,

"This life is but a mirror. Laugh, and smiles come back to greet us;
Scowl at fate, and just as surely frowning features ever meet us.
If it hurts, just grin and bear it. What's the use to cry and curse?
Make the best of circumstances; take what comes, it might be worse."

Beginning the New Year, you should be thankful for the storms that have racked and deluged your being, for they have served to make an abundant harvest. Rich may your sheaves be, not with tears, but with the wheat of love and sympathy, of wisdom and of charity, capable of feeding many hungry hearts, minds and souls with food that will comfort and satisfy.

And in your labors,
When some good work thou hast done,
Rest, and let the setting sun
Flush the cheek of welcome night;
Let the woodlands, far and near,
Breathe sweet music in thine ear!
Everything to thee seems bright;
Peace is come and wrong is gone,
Something good this day thou'rt done!

Something noble thou hast said
To the poor, barefooted maid;
It was but a single word,
But she blushed, and through the tears
Laughed the sun as Love which cheers;
It was music, what she heard.
Joy is come to that poor maid
For the good word thou hast said.

In thy mind some noble thought
Worthless things has set at naught?
Aspirations, high and just,
Have o'ercome the trivial strife
Which makes man's material life?
The ideal is thy trust?
Rest in peace—thy work is caught
In an act, a word, a thought.

The Pullbacks

FLOATED in on my desk from circumambient space this pithy sentence:—"The people who are not up on a thing are usually down on it." Then came a report from a medical society wherein a worthy old doctor remarked that he had never used the active principles and did not believe in them.

When men—or rather women—first began to wear clothes there were those who did not believe in them. The desert Arab now looks with contempt on his cousin who has forsaken the tent and dwells within four walls. The man who left the chase for wild animals and herded domestic ones was a degenerate to his fellows; but he agreed with them in his contempt for those who sought to cultivate the soil. Europe described America as one enormous counter at which stood our fathers with goods to sell; but her princes marry the merchants' daughters. The southern planter termed the north a race of base mechanics, and lost for lack of mechanics.

Every advance step in the progress of the race from savagery has been deemed a degenerative one by the conservative who does not feel the impulse to move along. The history of medicine is one unbroken series of illustrations of this principle of human psychology. Why should we expect the present generation to be exceptional in this respect and to act as no previous generation ever did. We don't. This is not an exceptional age. Mankind alters the cut of garments, sartorial and mental. Man adopts new creeds, he acquires newly discovered facts by the bushel, he expands the limits of his knowledge and his powers in every direction, but at heart he is the same old man who lived in the days of Solomon, and ages before that wise king.

The first sentiment with which a physician, old enough and experienced enough to have settled views of his own, receives a radically different idea, is of repulsion. "I know what I know; and this thing does not harmonize with it. If true, I have been mistaken in some of my most cherished opinions, self-deluded in some of my personal observa-

tions. Since the new-fangled stuff does not fit in with my own beliefs it must be wrong." And the man starts as an opponent of the innovation and only yields if by good fortune his examination goes deep enough to disclose coincidences he had not expected, and new facts that reconcile the old with the new.

The sun rises at exactly 6 a. m. this morning for you, but here is a man who says it rises sooner in the valley beyond your eastern horizon. You know better—but just climb the mountain and see if you get a different view from its height.

You do not believe in the active principles and have never used them, but that fact weakens the force of your objection; so why not investigate and try them, and then you can triumphantly silence their advocates by speaking from their own standpoint. That's the way to settle them—try it.

You are too honest to yourself and too well imbued with veneration for your profession and a sense of duty to your patients to make the trial anything but a strictly fair and impartial one—you deal as honestly with the matter as you would with old solitaire. So you get some of the most generally applicable active principles—aconitine, veratrine, strychnine arsenate, hyoscyamine, gelsemine, cicutine hydrobromide, hyoscine, calx sulphurata, calx iodata, and a bottle of a saline laxative—and you by no means omit the descriptive matter that tells how to apply these potent agencies. You study the books, apply the remedies, and are ready to demolish—the man who does not believe in them.

FAKE OPERATIONS—HOW MANY ARE THERE?

There is one thing that every physician should retain out of the old scholastic system inherited from the temple priest-physicians of Hippocrates' day, and that is the ever-present obligation due to the great and noble profession that has admitted him to brotherhood. Every act of our professional lives reflects honor or dishonor upon the entire

profession. Every time any member of our guild is held up to the public gaze as doing a discreditable thing each and every one of us suffers a share of the obloquy, and the entire profession is lowered in the esteem of the public.

The result is that there are two duties incumbent upon us, assumed with our matriculation, and from which we may never escape: to do nothing that will dishonor our guild, and to defend the guild and its members against any accusation calculated to do it harm. The latter duty entails that of intervening if we see anyone of the brotherhood about to do a wrong act, especially toward a patient, who is entitled to the protection of our guild as a body. But in this latter event we do not need to proclaim our brother's delinquency by the mouth of the town-crier or to discredit the entire profession because of the acts of one unworthy member. To do this is to fulfil our duty neither to patient nor profession.

The public press recently reported, on the alleged authority of a prominent physician, that a surgeon had performed hundreds of fake operations for appendicitis, merely incising the skin and sewing it up, meanwhile curing the real malady by those drugs he never ceases to decry.

From our knowledge of the man quoted we simply *know* he never gave that interview as printed, or maligned the profession as a body. Reporters sometimes pay more attention to getting up a readable article than to its exact truthfulness.

The testimony quoted is the word of a disgruntled nurse; and this would not for a moment be admitted as conclusive evidence by any qualified jury. Even a doctor has the constitutional right to an impartial trial, and to the presumption of innocence until proved guilty. In any event, the honor and interest of every member demands that such cases should be considered by the profession itself, with professional privacy; for the simple fact of such an accusation is a disaster, and even if the verdict is for the defendant, a grievous injury will have been inflicted upon him by the charge. He is therefore entitled to the full benefit of profes-

sional secrecy in the matter; trial and penalty, if any, being matters for ourselves alone. The laws governing our guild are ample for handling such cases, and if any member has evidence of such disreputable practices it is his duty to lay it before the professional tribunals. If he has no such evidence he has no right to place his suspicions before the public.

Could the charge possibly be true? There are doubtless an unprincipled few in the ranks of our profession, as in the clergy and the law, in every grouping of men. The confidence that is imperatively demanded of the sick by their medical director gives opportunities to the scoundrel that have no parallel elsewhere. This throws into bold relief the virtues of the profession as a whole, since so very few of them yield to the temptations, born of need and matured on ingratitude, and take advantage of the trust imposed upon them. The profession as a whole is poor; the mass of doctors have to count their pennies and weigh carefully the outlay of their dollars, even in the means of increasing their ability to fulfil their professional duties. Were these "fake" rascalities general we should be rolling in wealth. Are we? Well! !!

The facts of the case are probably these: an angry, revengeful nurse, seeking to hurt the employer who had discharged her, comes to a doctor with her tale of fraud, of patients betrayed, and the swindler enjoying the proceeds of his rascality. This arouses in the hearer's mind that natural resentment of this unworthy colleague's acts; an incautious expression to a reporter of this indignant repugnance follows, and the matter, with a wealth of elaboration, is spread before the eye of a public, which, always desirous of a new sensation, drinks in the delectable tale with avidity. Results—the medical profession and every member are smirched, and Quackery rejoices; the public confidence in us is weakened and the faith-healer, *et id omne genus*, correspondingly strengthened.

If it is true? The great Teacher once said: "*Let him who is without sin among you cast the first stone;*" and not a man heaved a rock at the culprit who had been

found out. Let every doctor ask himself whether he has ever been so driven by need, by pressing wants and pestering debts, that the opportunity to do a harmless fake on a wealthy man who could spare the money assailed his conscience shrewdly; whether it required all his moral force to resist it; and whether he felt the possibility of yielding to the temptation. If he did yield, he will cast no stone; if he did not yield, he will thank God for having endowed him with a little more firmness or for having made the temptation a little less than with his erring brother. In neither case will he feel vindictive toward the latter, but rather impelled to veil his delinquency from the public gaze and privately to admonish him to "go and sin no more."

Another year! Another year!
The unceasing rush of time sweeps on!
Whelm'd in its surges, disappear
Man's hopes and fears, forever gone!

Swift years! But teach me how to bear,
To feel and act with strength and skill,
To reason wisely, nobly dare,
And speed your courses as ye will.

—A. Norton.

ATROPINE IN DIABETES

It seems that the more this remarkable alkaloid, atropine, is studied, the wider becomes its field and the more striking are found to be its remedial powers. Rudisch made some interesting observations upon its action in diabetes (*Medical Record*). He found that atropine reduced the quantity of sugar excreted and increased the toleration of carbohydrates. Glycosuria uniformly disappeared more rapidly when atropine was given with antidiabetic diet than when diet alone was relied upon. The long-persisting trace of sugar, irremovable by diet, soon disappeared under the influence of atropine. When glycosuria reappears under an increase in the carbohydrate ration, atropine clears this away without reducing the carbohydrate allowance.

The methyl bromide of atropine proved less toxic than the sulphate, but it is more

costly and slow in displaying its good effects. Of the former Rudisch began with doses of 1-8 grain three times a day, for adults, increased until 1-2 grain at each dose was given. In one case three grains a day were given for a short while, with no other toxic symptom than dryness of the throat. Of the sulphate he gave 1-150 grains three times daily, increasing to 1-20 grain. These huge doses were well tolerated. The alkaloid was not pushed beyond the production of dryness of the mouth. In no case was an idiosyncrasy against atropine detected or a habit formed.

THE ART OF MEDICINE

Surveying the field of drug-therapeutics, with the view to appreciating the causes that have led to the neglect of the *materia medica*, I come at every turn upon this state of affairs, namely, that most physicians employ compounds of several drugs as therapeutic entities, to be directed against disease as a whole and not as a group of distinct agents.

This view sinks the individual characteristics of the single ingredients, and constitutes of each newly composed mixture a new remedy, to be employed as a whole. Take as an instance the formula employed by Prof. Lambert in the treatment of drug-habits: tincture of belladonna, and the fluid extracts of hyoscyamus and of xanthoxylon. The same formula is used for every patient, without any variation except as to the size of the dose, and this is regulated solely by the induction of toxic atropine effects. Old or young, male or female, none of the factors that modify dosage are considered or allowed to alter the proportion of the three ingredients.

One effect of this method is to multiply enormously the number of "drugs," since every mixture that can be put together is a new remedy. The impossibility of any human brain appropriating the millionth part of these possible combinations, and their effects on any malady for which they may have been advised, throws the doctor upon the mercy of the "authorities," from whom he hopes to get really useful prescriptions. It gets him also into the habit of using a few

set formulas, and of giving trial to every new one that may be urged on him by astute advertising.

The other way of viewing the prescription is, that it is composed of such remedies as are indicated by a study of the patient and are fitted to his disordered functions. Each ingredient is intended to meet a distinctly appreciated need, and in dose is arranged with that end in view. If it happens that the various needs can be met by remedies given at the same intervals and the drugs are not chemically incompatible, they may be combined in one mixture; otherwise they are dispensed separately, with appropriate directions. Here, a new arrangement is advisable at every visit, as the needs vary; one drug may have exerted enough action, another not enough; one need has subsided, a new one arisen; and so the physician meets the varying symptom-complex with a similarly varying arrangements of remedies, as they are indicated.

The latter seems in every way the preferable method. It is exact, scientific, and its efficiency is such as to be beyond the belief of those not familiar with the scientific miracles it works. But it *looks* difficult; it *seems* to require an insight into the working of the human body in health and disease, and a knowledge of the ultimate powers and action of drugs that bewilder those unaccustomed to such work. Besides, the older view of the prescription is so confirmed that it has become inveterate, and men with difficulty wrench themselves loose from their accustomed habits of thought and action. Physicians who have warped their minds into this unnatural method find it as impossible to change as it is to compel a long retroflexed uterus to stay straight in its normal position.

The exasperating thing about the matter is that when one really makes the attempt to comprehend this natural method it is so "dead easy!" The study of physiologic function, the recognition of deviations from normal operation and fitting the appropriate remedies are so natural that the only sensation one has very soon is that of a great relief, as the burden he has unconsciously

borne rolls off his shoulders and he can straighten his back!

Not that the work in either direction is nearly completed. We do not yet know our own bodies thoroughly; we are not yet versed in all the manifestations of disease; we are still discovering unsuspected powers in the oldest and commonest of our drugs. But for the greater part of our work we all—and I mean here the vast body of practising physicians and not a few superlatively qualified beings—know quite enough to accomplish our tasks, to do our duty by our patients.

The principal physiologic functions are well known, and their ordinary disorders are readily recognized by the average practitioner. The dozen remedies most frequently required are familiar to us all, and with them most of our work can be done. The three primary indications are elimination, raising depressed function, and lowering excessive action; and how much is there in the art of medicine beyond these three? With these alone one may accomplish much. Proceeding from them as a sound base, one may push very far his developments, and the refinements of drug application made possible by such studies may require very many reagents; but through it all the basal triad of indications remains unaltered.

Your patient has no more right to all the truth you know than he has to all the medicine in your saddle bags.—
Oliver Wendell Holmes.

THE FIRST USE OF CALCIUM SULPHIDE IN DIPHTHERIA

Dr. Ussher's article on calcium sulphide, published in CLINICAL MEDICINE for November has aroused such interest in this medicament that we may expect at last for that potent remedy the attention it deserves. It may be of interest, therefore, to refer to the original report on it that inaugurated its employment in modern therapeutics. This was a paper by a French practitioner, Fontaine of Bar-sur-Aube, describing his use of the sulphide in diphtheria. This publication excited much comment, and many physicians

throughout Europe took up the treatment and reported success with it.

The difficulties in the way of the general use of this drug were the impossibility of securing a supply of full and unvarying strength, owing to the exceedingly difficult nature of the drug as to its pharmaceutical handling; and the dread of its supposed toxic qualities. Then came in antitoxin, and its remarkable powers so impressed us that a veritable fetish has developed, and it is not safe for anybody so much as to suggest that there can be any other remedy for diphtheria. This has even progressed so far as to sweep the profession completely away from the old *materia medica* in a chase for more antitoxins, and nothing else is listened to but serum-therapy. Nevertheless, the most bigoted worshippers of antitoxin acknowledge that its value diminishes with each day of the disease, and after five days it is of problematic applicability, even in the desperately huge doses now advocated. That dangers attend the application of these can scarcely be denied.

Altogether, it seems that the claims of calcium sulphide may now be heard; and if it succeeds in saving a few lives that are beyond the reach of antitoxin, the latter's advocates need not take this as a slur upon their deity.

Fontaine's modest report follows:

"Calx sulphurata," Fontaine writes, "has for five years formed the basis of my treatment of diphtheria. During this period I have been compelled to fight almost without relaxation against this scourge. The experience with many hundreds of cases has taught me that this agent is alone capable of arresting the process of decomposition resulting from the diphtheritic infection. The antifermentative quality inheres to this body, since part of it traverses the organism without decomposing, part breaking up into sulphydric acid, sulphites or hyposulphites. Calx sulphurata increases the mucous respiratory secretion, loosening false membranes; it acts as a diuretic and diaphoretic; exerts a general action of hyperactivity of the circulation, and augments the appetite.

"For these reasons I make it my dominant remedy in diphtheria. As variants I employ

copper sulphate when an emetic is indicated, aconitine for fever, quinine arsenate and hydroferrocyanide for nocturnal or diurnal accesses; later, for general prostration strychnine, quassia for anorexia, hyoscyamine for spasm of the larynx or stomach, and iron arsenate for anemia and leukocytosis."

We had a physician in our city whose smile was commonly reckoned as being worth five thousand dollars a year to him, in the days too of moderate incomes. You cannot put on such a smile as that any more than you can get sunshine without sun; there was a tranquil and kindly nature under it that irradiated the pleasant face it made one happier to meet on his daily rounds. But you can cultivate the disposition, and it will work its way through to the surface.—Oliver Wendell Holmes.

GONORRHEAL RHEUMATISM

I have had so many instances of the control exerted over gonorrhreal infections by the sulphides of arsenic and lime that I want to hear of some failures. It is not well to have too great success. One doctor took a dislike to me because I said I had had no death from typhoid fever in twenty years; and he frankly acknowledged he did not believe that such a statement could possibly be true. But another physician present at once said that he had had no typhoid death in thirty years, and challenged contradiction. So that I fear the effect of asserting that I have had no failure to cure gonorrhreal rheumatism in twelve years with these same sulphides, and earnestly ask my friends to contribute a few failures, to make the report less radical.

Benjamin Franklin said he failed to be convincing when he fondly asserted his views; so he formed the habit of saying that "he did not doubt the correctness of his opponents' views—but that it had sometimes seemed to him that possibly the contrary might be true in some cases, under some circumstances." That set the other man to thinking—without arousing his self-assertiveness.

Some doctors resent any suggestion that their practice can be bettered. They seem to feel it a duty to stand up for themselves, under all circumstances, and if you suggest

a remedy, they at once retort that it can not possibly be as good as their own.

This is directed, therefore, solely to those who have not as yet succeeded in curing gonorrhreal rheumatism. Give a grain of calx sulphurata, full U. S. P. quality, and a milligram of arsenic sulphide, together, at 10 a. m., 4 p. m. and 10 p. m., adding a fourth dose in the morning, if it can be borne, at least an hour before breakfast. Keep this up until the skin smells of sulphide, and for two weeks more; and if the patient is not well then, write and tell me, please.

You can't plant a new crop in an old field till you clear away the stubble. The birth of an idea usually means the death of an ideal.—Herbert Kaufman.

YOU NEED BACKBONE

You know you do, Doctor. There isn't a day in your life that you do not need something to stiffen your spinal column to meet the vexations and disappointments of life—something that will help you to ignore the opposition of your enemies and the hectoring of your friends; an antidote against crosses in love and double-crosses in business. You may be proud of the peculiar rigidity of your backbone and of the quality of the "nerve" that it is supposed to house, but you know yourself that there are times when it softens like a tallow-dip under the warmth of flattery, or becomes frosted and frangible when the winter of adversity sets in.

Thus far no man has found a serum or devised a specific for weakness of the moral spine. Therefore we purpose to enter the field with a little magazine which will answer the same purpose better, we think, and be pleasanter and cheaper to take—the subscription price being only 50 cents a year. It will be called *The Backbone Monthly*. The first number will appear in January, and it will be the organ of the Backbone Club. You are hereby invited to become a charter member, which will entitle you to receive the magazine on the same terms as other people, will give you the privilege of buying all the books and

other publications that the Club may hereafter issue, and of helping boost the "Backbone" movement in your own community and everywhere else. Remember—all this for an annual subscription to *The Backbone Monthly* for 50 cents—three subscriptions for \$1.00; eighteen for \$5.00.

The Backbone Monthly will not be big, except as to quality. It will be of a size convenient for your pocket, every article will be short, and nothing will be admitted which hasn't snap, fire and vivifying purpose. We shall borrow when we want to and plagiarize when we please—providing the goods are up to the standard that we require.

It will be artistic if we can make it so, but "Roxcroft"—God forbid! Good to look at, good to read, and a true heart-warmer, but no vehicle for cranks or for the clever scoffing of fools over the works and the longing and the aspiration of earnest men honestly seeking to do good. It will strive to stiffen backbones, not dissect them out.

The Backbone Monthly will be of special value to doctors, for it will stand with them and behind them. But it is not for doctors only. It will cater to no special class. We hope to make it an inspiration to young and old, to men and women, to rich and poor, to scholar and sportsman. It will not aspire to be profound, or very wise or even very clever. But it will try to give every reader hope, optimism, joy in living, and an ambition to become stronger, better, wiser, more lovable, more efficient. It will be filled with prescriptions for the blues, which can be filled without recourse to the pharmacist,—in fact, you will find it an intellectual toddy and a moral high-ball without a bit of a headache or a single jag in the whole twelve numbers. Lots of stimulus will be found, but of a kind always to do good, never to do harm.

All for 50 cents a year!

Doctor, we want your subscription, we want it bad, and we want it now. Send us five dollars and prescribe it for a bunch of your "chronics." Best New Year's present you can make—also the best investment.

Address orders to The Backbone Publishing Company, Ravenswood Station, Chicago. Abbott, Clough, Burdick and Butler are responsible for *The Backbone Monthly*, and they are going to make it hum!

We want your help.
Today, please.
Now!

PREPARE FOR THE WINTER DISEASES

Now that the winter is upon us, there is a diminution in the number of deaths from diarrheal diseases, but we may expect a very large increase in the number of deaths from pneumonia, tuberculosis and other long diseases.

Whooping-cough certainly will be more prevalent, and it is well to remember that this affection is not the harmless disease it is sometimes thought to be. While it may not be followed by so large a proportion of death as some other diseases, it invariably leaves the victim in a worse physical condition and less able to fight off other diseases. Many parents have so little fear of whooping-cough, that they do not hesitate to expose other children to it. If there is suspicion that a child has whooping-cough, it should be isolated from other children, no matter what the inconvenience, until the danger has passed. That is according to the golden rule.

In case of whooping-cough, if it is at all severe, the patient should be kept in bed. The child needs an abundance of fresh air day and night, thorough ventilation, but should not be permitted to run around, which is bad for the patient and a danger to the other children. Saturation with calcium sulphide, calx iodata for the bronchial symptoms; atropine, *enough*; careful attention to the alimentary toilet—these will do the rest.

Those who are subject to diseases of the air-passages should avoid too sudden changes of the weather, or at least should be prepared for such changes by additional wraps. The habit of taking a daily morning sponge-bath materially lessens the danger of taking cold.

The practice should be begun while the weather is mild and gradually it becomes possible to take a sponge-bath or a hand-bath in quite cold weather without chill. If the symptoms of a cold appear they should be recognized early and nipped in the bud by appropriate medication along active-principle lines. Such remedies as aconitine, atropine and calx iodata, with the associated "clean-out," are usually indicated.

Forth from the casement, on the plain
Where honour has the world to gain,
Pour forth and bravely do your part,
O knights of the unshielded heart!
Forth and forever forward!—out
From prudent turret and redoubt,
And in the melley charge amain,
To fall but to rise again!
Captive? ah, still, to honour bright,
A captive soldier of the right!
Or free and fighting, good with ill?
Unconquering but unconquered still!

—Robert Louis Stevenson.

IS CRIME A DISEASE, AND IS SOCIETY AT FAULT

Dr. Emory Lanphear has contributed to *The St. Louis Republic* a series of papers in which he presents his views on socialism, of which he is an advocate. The choice of the medium was questionable, as the papers were accompanied by a running comment of unfriendly criticism by one who did not believe in socialism, and while opposing Dr. Lanphear's views whenever an opportunity offered, withheld the need of approval when merited. This is not calculated to do the reader any good—if he is a socialist he is irritated by the one-sided conduct of the discussion; if not, he is prevented from getting some much-needed information.

It is not the part of this journal to discuss questions of religion, politics, or general science, except in so far as they touch on our chosen field, the art of medicine. But in one point this series does touch us, and that is when Dr. Lanphear discusses the relation of crime to pathology.

Strictly speaking, the term crime is applicable only to such transgressions as were

punishable by death under the common law, these being murder, rape, robbery, arson, burglary and grand larceny. Sin is transgression of the laws of God as interpreted by each church to fit its own tenets. Vice is defined by Lanphear as "improper actions dependent upon inordinate indulgence of natural appetites which are in themselves innocent: intemperance, unchastity, duplicity, depravity, and possibly some dishonesty and lying." The socialist claims that with proper regulation of our social system the principal causes of vice and even of crime would disappear. "The criminal is such from heredity, environment, training, lack of education, passion, or laziness and love of display."

If the socialist system extinguished competition and rearranged society, so that every individual would have his needs met and the fear of want removed, much of the present incentive to crime would be removed. For examinations of very many criminals have shown that among these there is a vast preponderance of the degenerate, the weak, the diseased, the unfit; and that criminality and inability to compete with the honest and healthy are inseparable. There is no legitimate basis for self-gratulation for your uprightness, my friend; if you resisted temptations before which your neighbor fell, you did not feel the force of the temptation as he did, or you would have fallen too. This is the argument.

But heredity—Lanphear says—has even less to do with this than environment and example. Better these, and the evil influences of bad moral heredity may subside, as the physical debility of consumptive children has done. The imitative tendency, with hunger, cold, rags and illness, are far more potent incentives to crime than is a hereditary tendency. If these are done away with, and a wholesome system of training and education is skilfully adapted to each child's needs, the temptations removed and self-control learned, crime and sin should indeed become rare. Altogether the socialist draws an attractive picture of society as it should be, he asserts, were it reconstructed along his lines.

But would these benefits really follow? Somehow the practical application of theories has a habit of developing difficulties unforeseen and entailing consequences unexpected. When vaccination had proven its power, the early opposition was replaced by extravagant expectations of its influence in prolonging the average of human life. But it turned out that not all those saved from smallpox lived to three-score-and-ten; but the multitude of children spared by that disease afforded more material for the ravages of scarlet-fever and kindred pests, which became much more prevalent.

The vice of greed, the lust of power and of property, the desire for luxuries and the dislike for work, are innate in the human being; and however much we may alter our dress and our speech, our creeds and our institutions, however great the progress we may make in knowledge and arts, the human heart remains the same—and we have good authority for pronouncing it deceitful and desperately wicked.

The desire for preeminence is innate. Every human being craves to be distinguished from the great mass by some notable characteristic. Carlyle was amused by the woman who bragged because her teeth were harder to extract than those of anybody else in the village; as if that were a proof to her of superiority! Every woman wants to garb herself more becomingly than all the other women. The man who prayed that he might have a full harvest of corn "and all his neighbors little nubbins" still lives and hasn't changed his nature. Men will still crave the woman other men want, and having secured her, will in time tire of her and want some other woman; and so will women still fancy some particular man, and that more especially if the other women also want him—and she will tire of him and want a change—and all these things are not dependent upon law, or creed, or social system, but on human nature.

Are we then opposed to socialism or to the socialist program? Not a whit. Only through effort comes progress, only through actual trial is the true value of a proposition demonstrated. It is only the men of action

who make things move. When socialism succeeds in convincing a majority that some one of its proposals is wise it will be tried, and one success will pave the way for another.

Nevertheless, we are not ready to admit the primary tenets of the propaganda; that competition is essentially evil or responsible for the ills attributed to it; that individuality should be merged in an all-embracing governmental machine; that Sparta was better or more desirable than Athens, or gave the world a tithe as much; or that New Zealand has yet shown that life under her system is better than that where competitive conditions prevail and one *must* use his wits. If man can be emancipated from the struggle for existence he will be a unique exception in the field of animate nature, and the experiment has yet to be successfully made.

Labor is life; from the inmost heart of the Worker rises his god-given Force, the sacred celestial Life-essence breathed into him by Almighty God; from his inmost heart awakens him to all nobleness—to all knowledge, "self-knowledge" and much else, so soon as Work fitly begins. Knowledge? The Knowledge that holds good in working, cleave thou to that; for Nature herself accredits that, says Yea to that.—Thomas Carlyle.

HOW AND WHEN TO GIVE ARSENIC

Arsenic is a remedy that is often misused. It is frequently prescribed for various cutaneous affections, especially the dry scaly forms; yet when the body has been saturated with arsenic to a certain degree its presence is shown by just such an eruption, possibly with loss of hair and beard, and yellowish cutaneous discolorations due to the combination of the metal with albuminoid substances.

So also when arsenic is employed to combat palustral fevers; if the doses are too large it occasions a febrile movement that can only with difficulty be distinguished from that of the malarial disease, especially as it assumes the periodic type. Nevertheless arsenic here also is too valuable a medicament to be laid aside.

In neuralgias and other neuroses good results are obtained from strychnine arsenate.

In anginose and suffocative conditions this should be combined with hyoscyamine for the spasmody element and with morphine for the pain. So taught Burggraeve, unaware as yet that the pain is so largely spasmodic that the morphine is unnecessary, hyoscyamine being capable alone of giving more relief, without the numerous disadvantages pertaining to morphine. The immense advantage of associating glonoin is also a development of American clinical observation.

For the fever of consumption Burggraeve employed caffeine arsenate to retard the organic combustion, and found many times that even in galloping phthisis the course was arrested, and improvement followed the lowering of temperature and slowing of pulse.

For apyretic or chronic maladies, we have iron arsenate for chloroanemias, sodium arsenate for scrofulosis, arsenic iodide for the strumous, sulphur iodide for herpetic affections, etc. The use of antimony arsenate for the insomnia of wealthy, lazy gluttons is one of those apt and delicate touches that make active-principle therapy so attractive. In treating gonorrhreal infections the addition of a milligram of arsenic sulphide to each dose of calx sulphurata materially enhances the effect.

If there is any remedy that will cause arrest and retrogression of arteriosclerosis it is arsenic iodide. This is, of all preparations of either iodine or arsenic, the quickest to get to work, and probably the safest, as least likely to leave an arsenical deposit in the body. Besides, as both elements irritate the eyelids, we have in this a certain means of recognizing the full-dose action, when it is time to reduce or suspend the remedy.

Copper arsenite fills a place of its own in combating gastroduodenal mycoses and fermentation, allaying many forms of gastric irritability, such as that of alcoholics; also lienteric diarrheas, as well as the milder affections of the digestive tract in children.

In all cases arsenic should be administered in small and frequent doses, sustained until evidences of its action appear, then stopped

if the need has passed, or continued in moderated dosage if the malady is chronic.

The effect of arsenic in favoring fatty degeneration explains its value in acute febrile affections, where it acts powerfully in resolving the newly formed products of the disease. In malarias it is now believed that arsenic, joining itself to the red blood-corpuscles through its well-known affinity for hemoglobin, protects these bodies from the attacks of the plasmodia.

Arsenic is a *safe* remedy—toxic effects from it are not possible to the physician who is aware of its action and watches for the known evidences thereof.

ANTAGONISM OF DRUGS

Moeller states that treating a man for insomnia and night-sweats, he administered morphine and atropine simultaneously, and secured the action of each without interference by the other—inducing sleep by morphine and stopping the sweats by atropine. This harmonized with experimental observations of Knapsteen of Bonn.

What, then, becomes of the classic assertions concerning the antagonism of drugs? Every day we give together strychnine and hyoscyamine, and even in strangulated hernia secure bowel movements therewith. In gastralgia one generally secures the desired effect only by combining morphine, hyoscyamine and strychnine; and in seasickness the terrible cramps are calmed by the same combination. When Burggraeve began to feel the approach of age he commenced taking every evening strychnine arsenate, aconitine and digitalin, thus equilibrating his physiologic accounts; correcting also a disposition to arthritis and gravel.

Very well. But this illustration does not in the least invalidate the principle of single-drug therapy; it does prove, however, that under certain conditions certain drugs may support each other—the prescriber selecting their dosage according to changing conditions.

A short time before his death Claude Bernard said to Burggraeve: "Instead of compounding remedies which contain an in-

finity of most-dissimilar ingredients, and which pharmacy seems to have so bizarrely assorted that each patient might find there his special but unknown remedy, you employ pure principles, exactly dosed and having an action perfectly known. We know not only what is this action, but we have the power to decide on what anatomic elements it is exerted, thanks to experimental physiology, which even in opium has made known to us the existence of alkaloids with action diverse and even opposed. It is thus one practises scientific medicine."

But, people say, why not employ the medicaments "as nature gives them to us?" Using the same process of reasoning, why go to the trouble of extracting metals from their ores? Isn't it about as reasonable to coin our quartz into silver dollars or build bridges with the red dirt of the northern Wisconsin mines?

Some day the wise man will attach the physician to his family, not to cure diseases but to prevent them. As a business matter it will be more economic.

—James P. Warbasse.

THE WOODY FIBERS OF PLANTS: WHAT GOOD?

Why should you insist on your patients swallowing the woody fiber of plants when you know it does them no good?

Tannic acid interferes with the absorption of the really valuable principles in medicine; why should he insist on his patients swallowing the tannic acid?

Every useless element of a plant increases the bulk of the dose and renders it disagreeable to take and difficult to be retained by the stomach, while these substances render absorption slower and delay the real medicinal elements of the plant in getting to work. Why then should you insist on the patient taking these disagreeable elements of the remedial plant?

The coloring matter in medicines does not exert any desirable remedial action on the human body but only renders the dose less pleasant to take and especially prone to decomposition; so that the medicinal prepara-

tions containing these coloring matters deteriorate materially. They are therefore injurious as well as useless. Why not leave them out?

By excluding the woody fiber, the tannic acid, coloring matters and other inert principles, we finally have left of our plant-remedy a group of active principles: alkaloids, glucosides, etc. These principles are developed in the plant, not for *our* use but for its own; and under varying conditions of sun and shade, heat and cold, dryness and moisture, climate, seasons, etc., these specific principles are developed in varying quantity and proportion.

Each of these active principles exerts an action of its own upon the human body, differing in some respects from that of all the other active principles in the same plant. In so many cases there has been proved a direct antagonism between two or more active principles developed in the same plant, that we are constrained to ask whether there is not some such relation between them as there is between the toxins and antitoxins of diphtheria and other diseases?

This antagonism, and the different development of the active principles under varying conditions, are so marked that the preparation made from one lot of the plant at one time and another lot of a similar plant at another time may exert diametrically opposite powers. The actual effect exerted by the plant-remedy, that is, by the sum total of the group of active principles it contains, is represented in general by the stronger, plus, minus, or variously modified by, the others, according to the degree to which each of them may have been developed in the plant.

The usual way to find out exactly what the plant-remedy will do, is to try it on the patient, a method fraught with perils, condemning the physician to timid experiment at that period of the disease when alone he can hope to modify radically its course by direct, powerful, intelligent intervention.

For this reason we say, use the active principles, given in doses which will do exactly what we wish.

To enable us to do this intelligently, we must study our patient and recognize the pathologic conditions present; not at all or necessarily the name of the disease, since remedies do not act on the names of diseases but on pathogenic conditions, and we may find the same pathogenic condition running as a primary element through many diseases.

This compels us to study, especially and particularly, the great book of nature, the patient himself. This study, illuminated by the light of modern physiology and pathology, enables us to note with exactness the points at which we can apply remedies whose exact action is known to us, as we see certain indications for the need of exactly the effects we know these remedies will produce. Guess-work and uncertainty are eliminated, and our confidence in our drugs and in our own ability to apply them usefully, grows with every fresh illustration of their applicability.

The active principles are "medicines with the dirt left out."

A lady, endeavoring to describe to friends the active-principle method, said: "The alkaloidal doctor gives very little medicine, but what little he gives goes right to the right spot, and does exactly what he wants it to do."

There is many a nobleman dwells in a cot,
The palace holds many a clown;
And princes have beds out of tamarind bark,
While beggars have couches of down;
Brave kings are in cotton, base serfs are in silk,
While slaves like an emperor show,
For the only true test is the heart in the breast—
But the world doesn't look at it so.

—Charles Eugene Banks.

THAT NEW ANESTHETIC

A new medical marvel has recently appeared upon the horizon. For the last few weeks it seems impossible to pick up a single newspaper which fails to call attention to the merits of stovaine, which is being injected into the spinal canal to produce anesthesia. The wonders which can be accomplished with this preparation and the re-

markable results obtained by the operator, Dr. Jonnesco, are rapidly becoming a household tale.

As we all know there is nothing very new about stovaine, nothing new about spinal anesthesia. Nearly ten years ago, a French surgeon produced surgical anesthesia by the intradural injection of cocaine. Many patients were operated upon, some even here in Chicago, and there were some deaths. Then eucain was given in the same way, and its career as a spinal anesthetic was equally short. The next remedy to be so used was magnesium sulphate. Stovaine falls heir to this decade of experimentation. It acts in precisely the same way as the others. While it is a good remedy and exceedingly useful in its selected sphere, there is no evidence to show that it is any more of an "epoch-making" remedy in spinal anesthesia than the others already tried and found wanting. Indeed, that it was not harmless as a lumbar injection was pointed out some four or five years ago.

Understand, we do not wish to pose as "knockers;" our doubts apply to the mode, not to the remedy itself. The technical difficulties and the dangers of spinal anesthesia are so great that it is hardly likely that it will ever become generally popular with physicians. The only new features in Jonnesco's much advertised clinics seem to be the association with strychnine and the injection into higher levels of the spinal canal. How great advantages these innovations may present cannot, of course, be determined by the newspaper reports.

Stovaine has been before the profession for five years. It was discovered by a French chemist, in Berlin, in 1904. Chemically it is dimethylaminobenzoylpentanol. For local use or for infiltration anesthesia it is safer than cocaine; in fact, it is undoubtedly a very valuable preparation, seeming to have decided advantages over similar remedies of its class, in extracting teeth, for operations upon the mucous surfaces and for minor operations elsewhere. But to announce it as something entirely new, something wonderful, a medical marvel, is a grievous error—one which the medical profession will be

the first to recognize. Apparently the manufacturer's press agent has been busy, but this mode of presentation to the laity will, in the long run, do more harm than good.

Everything in Nature seems to have this sign on it, "Move On." Nothing stands still. Every atom in the universe is on the move. You must either move on or get run over.

THE COMPLEX ACTION OF DIGITALIS

I am asked by men who know how to use digitalin, what is the action of digitalis itself. This plant contains four active glucosides, of which digitonin sedates the heart and relaxes vascular tension, antagonizing the other three. One would be inclined to say that the action of digitalis is that of the stronger group, minus the weaker. But the question is much more complicated, owing to the different solubility of the four glucosides and the time each requires to get to work.

Take digitalis as administered in powder. Digitonin is quickest, getting to work in a few minutes and its effects lasting two to four hours; so that the first effect is a sedative-relaxant one. But within half an hour we get the digitalein action, antagonizing digitonin; the tonic action on the heart begins, and lasts three to six hours, according to the dose. In thirty hours we get the heart-tonic and vasoconstrictor action of digitalin, and in sixty hours both of these effects still more powerfully from digitoxin, which latter may be sustained for days, or as some claim, for weeks.

However, if we employ the infusion we get the effects of only digitonin and digitalein, which alone are soluble in water, while from the tincture we get the digitalin and digitoxin action, these being soluble only in alcohol.

It has been asserted that digitonin, being closely related to saponin, renders digitoxin soluble in water. But even if this were admitted it would not excuse the use of a variable mixture of antagonistic remedies, either of which may preponderate.

A curious misconception exists as to the diuretic action of digitalis. Since digitonin

and the three tonics are all diuretics it has been asserted that the crude drug is therefore preferable to any one of its glucosides. But digitonin is only diuretic when the vascular tension is so great as to prevent a sufficient supply of blood reaching the kidneys. The other glucosides are only diuretic when vascular tension is so relaxed and the heart-force so low that that organ is unable to pump enough blood to the kidneys. It evidently is impossible for both to act as diuretics at once; and as their action is directly antagonistic, each must as directly interfere with the other when really indicated.

Nor is the argument valid that digitonin allays the perilous vasoconstriction of digitoxin; for the former has done its work and been excreted two whole days before the latter begins its work.

Yet I do not doubt that people can be found who argue for meal made by grinding corn and cob together as they do for whole wheat; although the world at large prefers to eat the kernel and leave the bran and the straw for the animals.

Every honest conviction, held by anyone, contains a truth and a lesson for everyone. And the way to derive the good is to treat it with mingled courtesy and caution, wearing neither horns nor a tether.

THE TREATMENT OF THE TUBERCULOUS

Lawrence F. Flick, the medical head of the great institution endowed by Phipps to fight tuberculosis in Pennsylvania, is a man whose utterances on this topic are too important to be neglected. Flick has a right to an opinion, in virtue of his rarely equaled opportunities for observation, which he has embraced with an ardor not always manifested. His paper in the November number of *Merck's Archives* is of such merit that we advise readers to secure it, by writing to the publishers, Merck & Co., University Place, New York City. To illustrate our view of its value we supply some extracts:

Tuberculosis is probably always primarily a lymphatic process: not recognizable until the bacilli pass from the lymph into the lungs. Discovery in the first stage is not

so difficult if anything happens to induce a careful examination. "If a person is ailing, loses weight, color or strength, or his vital functions are disordered, tuberculosis is to be sought." This is pretty sweeping, and shows how often Flick must have found this disease when it was sought on such general principles.

"If there was exposure to the disease it should be looked for." Early tuberculosis may not produce symptoms. Nothing should be taken for granted. There may be an occasional cough, hypersecretion of respiratory mucus, anorexia, malaise, especially in the forenoon, afternoon headache, nervous hyperesthesia, vivacity alternating with depression, slight fever, pulse faster, pupils dilated; slight bronchovesicular breathing or harsh breathing with pleuritic rub on expiration over the affected area, increased tactile fremitus and vocal resonance, slight bronchophony, impaired resonance. The signs are distinctly circumscribed.

The tendency is rather to recovery than to destruction. Treatment retraces the steps of development. He questions whether an infected person is ever completely freed from tubercle bacilli. Recovery means arrest of destruction and restoration to physiologic health. Very good, but it lasts only while the patient adheres to the life that brought it about. All that is needed for recovery from the earlier stages is a simple life, proper diet, fresh air and such medication as will restore the physiologic functions. If tissue is destroyed and mixed infection present, consumption of energy must be curtailed, the manufacture of energy encouraged.

Most of these cases can be cured. Begin with a week or two of rest in bed, followed by comparative rest, sitting up in the forenoon only; the up-time prolonged as results justify. Exercise follows as the condition indicates. The diet must suit each case: Flick's own being one solid meal a day, with 3 quarts of milk and 6 raw eggs for the balance. The one meal is liberal and varied—meat, vegetables, fruit; one hour to eat it in, thorough mastication, the food to be eaten with relish. If insufficient, fruit and nuts may be eaten between meals. Keep in

open air, day and night. Drafts may be disregarded.

"Much can be done to aid recovery from tuberculosis by the use of properly selected drugs." Dr. Flick uses, when needed, artificial digestants, eliminants, cardiac sedatives. One should use no drugs that dry up secretions and excretions and interfere with nature's recuperative processes. Opates and depressants are to be avoided. Symptoms should be regarded as nature's efforts at cure. Cough can be controlled by will-power. Secretions should be stimulated. Give no drug except for a specific reason in harmony with nature's laws, never to quiet the cry of an organ for relief.

There are no specifics here, but one drug of great value is iodine. He uses europhen by inunction, in the form of a saturated olive-oil solution, and praises it highly. He also uses glonoin, magnesium sulphate, strychnine, arsenic, pepsin, pancreatin, hydrochloric acid, phosphoric acid, sometimes digitalis, as they may be indicated.

It is better not to change from the accustomed climate. The regimen that cures should regulate the subsequent life of the patient. He must be trained to live properly in his old or new sphere.

Our doubts are traitors, and make us lose the good we oft might win, by fearing to attempt.—Shakespeare.

COMMON SENSE

"And with all your getting, get understanding."

In a recent number of *The Saturday Evening Post* appears one of those caricatures of the doctor which makes him ridiculous in the public estimation. The wife and mother in the story concludes to "take a rest," sends the children away, and the unwonted quiet and idleness make her a prey to imaginary evils. The doctor meekly accepts the situation, encourages the self-deception and "treats" her for an unnamed malady, with dark hints of its ghostly possibilities.

It seems queer that if there are such doctors they keep out of sight. Instead, we really meet some of this sort: A girl was

ailing, drooping and unable to eat or sleep. Finally the doctor was called; heard the story, made due examination, got up and said: "There's nothing the matter with the girl's bodily functions. She has something on her mind. Find out what it is. Good day!" Then the girl confessed—she wanted to go to college and could not summon courage to tell her parents so!

It is not well to take young girls too seriously—sometimes. But then again—

A lady walked into our office, pointed to a patch of chloasma on her face, and exclaimed in a tone of passionate earnestness, "Cure this or I take my life!" What folly it seemed—but investigation revealed the situation. She believed her husband had an "affinity," a surpassingly beautiful woman, while the discoloration rendered the wife not pleasing to view. It was deadly earnest with her; she meant what she said and would have carried out her threat, were it not that the malady was easily cured. Did this suffice to recall the husband's wandering affections? *Quien sabe?* Some woman says what men really fall in love with is a little pink face-powder.

No really successful doctor lacks common sense. Besides his medical lore and his skill in applying it, he is proficient in the broader knowledge of humanity that sheds such a side-light on the disease-picture. He is ready to puncture the swelling balloon of Fear, and to prick into consciousness the sluggish paresis of indifference; to reassure the apprehensive, to warn the neglectful, to restrain the self-indulgent. In very truth, a large knowledge of mankind, with but a small modicum of professional knowledge, is apt to succeed better than a profound versing in medicine with little or no realization of the tergiversations of men's and women's mental processes.

Let no man plead true worth with one breath and bewail his ill success with the next. True worth will make itself known and compel appreciation, else it is not all true—there's a flaw in the sapphire. "If you are a great general, come down and fight me," was the defiance hurled at Fabius. "If you are a great general you will make

me come down and fight," replied the wary old fox.

If you feel that you are not valued high enough, your estimate of your true worth is too high, or you fail to present your wares in acceptable shape. You may be trying to persuade the miller that little nubbins make better meal than fine big ears; or that little leghorn eggs are worth more than the big plymouth rocks. If you really "have the goods," you must be a poor sort if you can not make men realize this. If "the other doctor" knows so much less than you, and yet gets most of the practice, he must be a very much smarter man and able to use his little knowledge to better advantage than you do your greater stock. As a practical man, your own testimony shows his superiority.

Michigan says she raises better apples than Washington. The western pomologist selects the very best varieties, plants in the soil best suited, bestows on them all possible care, gives exactly enough water at exactly the best time, sprays the trees whenever codling moth or San Jose scale produces a brood, picks his fruit right, packs it right, advertises it right, and gets from three hundred to one thousand dollars an acre of net profit from his crop. Michigan has the advantage of saving a 2000-mile haul and has better-flavored fruit. She plants out an orchard, which she leaves to itself thereafter. If the apple crop is good, very well; if not, it's "the off year for apples." All the cultivation the trees get is what the hogs give by rooting; all the water is what the skies supply. Every apple may have a worm in it, and these men may realize thirty dollars an acre, with good luck. Washington forbids the export of a wormy or imperfect apple.

Brother doctor, if your bank-account is wormy, whose fault is it?

MUCK-RAKING WITH DISCRETION

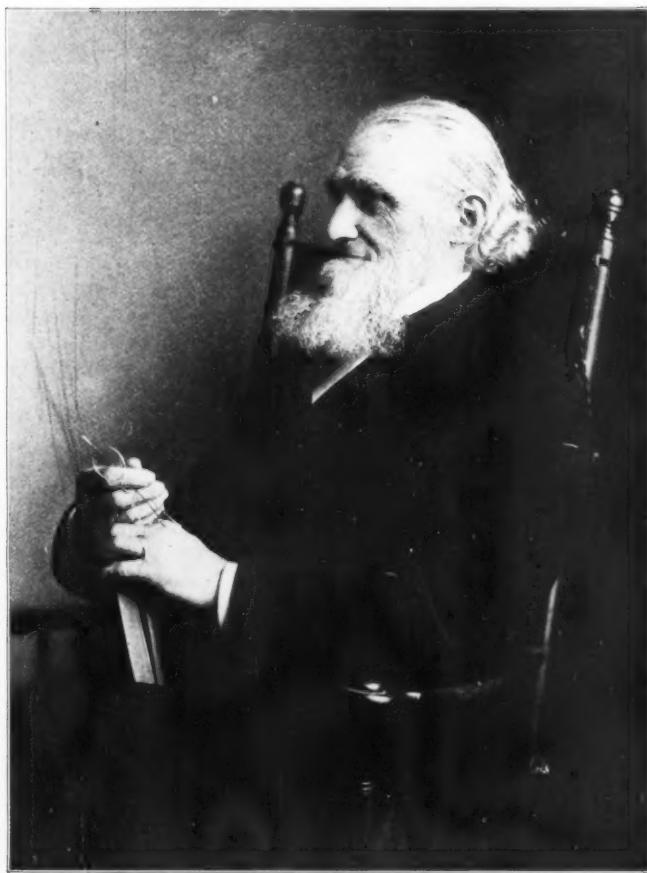
Standing on the doorstep one day I saw a little dog gaily racing down the street. Suddenly from an open door dashed a larger

dog, took the little one full on his beam and rolled him over and over in the gutter. The little dog recovered himself, took one glance at the aggressor, saw he was not in his class, and without an instant's hesitation tore off to where a still smaller puppy was sitting, wholly unconscious of the fray. On him the injured canine pounced, tumbled him over and took full satisfaction for the affront inflicted by the larger animal.

How very human!

Men go further, and do not wait for attack. A man gets into a position that enables him to attract notice. He is avid of the limelight; he wants reputation, to loom large before the admiring public, so he looks about for an opportunity. Here is a group of malefactors, men who are battenning on gains extorted from the fear, credulity, ignorance, of their fellow men. But—these scoundrels are rich and influential—one must be wary of incurring their displeasure. Better look about on the outskirts for some inconsiderable party whose guilt may be problematic, wholly technical, or perhaps merely lies in an inference with scarcely a shadow of reason and no evidence whatsoever. But the man can be attacked safely, and the difficulty of making his action out as wrong in itself testifies to the sharpness of the official quest of guilt. Altogether, much repute is to be won from such a case and no risk incurred. And so the innocent man is involved by an accusation that is in itself a smirch, and an expense that is ruinous; the fair name of Truth is dimmed, the public respect for Law as synonymous with Justice is weakened, and the elements in thought and sentiment that make toward the disintegration of society are quickened into activity; and all that some unprincipled rascal in authority may elevate himself.

We need a certain amount of muck-raking, but not of a kind that drags the petty official out of the mire and holds him up to the public gaze, while raising a gilded curtain before "the malefactor of great wealth". And in seeking truth let us go behind the veil of the external and seek to know motives, so shall we understand.



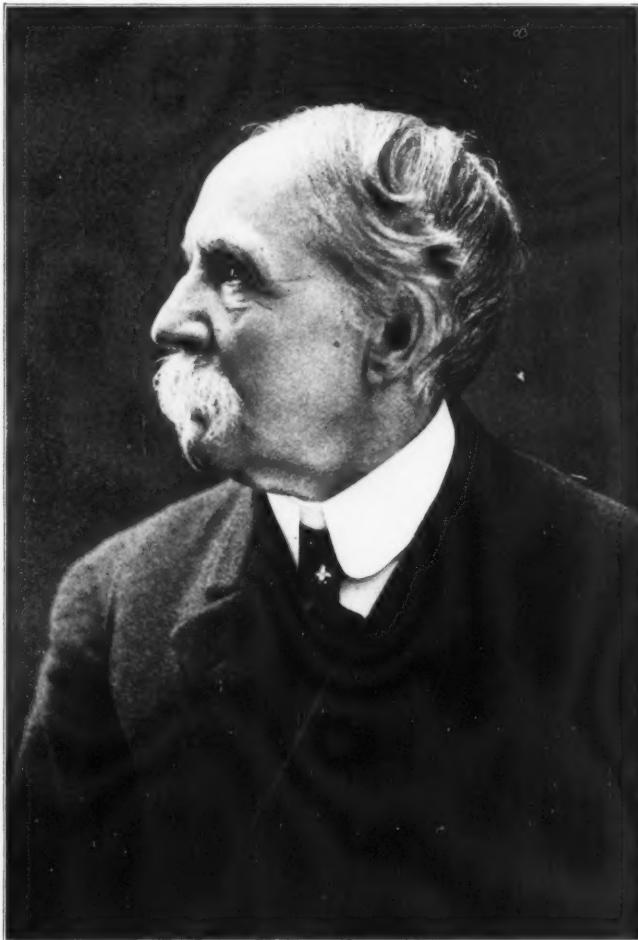
DR. E. M. EPSTEIN

DEAR OLD DOCTOR EPSTEIN! Now in his eighty-second year he still comes down daily to his desk in the Clinic office, and still delights us with his wholesome, kindly philosophy and profound erudition. He has had a varied career, as teacher, preacher, physician, naval surgeon and editor. How he came to be, and remains, an enthusiastic alkaloidist is told on another page. We are glad to have opportunity to give our friend and colleague this well-deserved honor.



DR. F. A. WALTERS

THE doctor apologizes for the youthful appearance of this picture, which was taken some years ago, but his good wife is authority for the statement that he is still young and still "looks good" to her, as we know he does to us. Dr. Walters, who was formerly president of the Wisconsin State Homeopathic Medical Society, lives in Stevens Point. He is a pronounced and enthusiastic alkaloidist, and writes about "Rational Therapeutics" in this number of the Clinic.



DR. T. D. CROTHERS

PROBABLY the leading advocate in this country of scientific temperance reform, Dr. Crothers is active in the fight against "Giant Alcohol." This month he writes of the recent International Anti-Alcoholic Congress, held recently in London, to which he was an accredited delegate from the U. S. Government. Last year Dr. Crothers was the president of The American Medical Editors' Association. He lives and practises in Hartford, Connecticut.

Alkalometric Reminiscences

By E. M. EPSTEIN, A. M., M. D., Chicago, Illinois

EDITORIAL NOTE.—Dr. Epstein is not only one of the oldest of dosimetric practitioners; he is also the eldest member of the editorial staff of "The American Journal of Clinical Medicine." To do him honor, to show him something of our love and esteem, we have "featured" the good doctor somewhat in this issue. On a preceding page will be found a brief biographical sketch, and an excellent picture of Dr. Epstein, showing him just as he looks today.

MY alkaloidal experience from practice came to me some twenty-five years ago when, after having seen God's great world in different lands and seas and continents, as a practising physician, I settled down to practise in one of the oldest southwestern villages of the United States. It was with me the same as the founder of our method, Burggraeve, describes in his "Repertoire" of 1872 (p. 356), a welcoming attitude of the country physician to his happily conceived method of dosimetry:

"While the country physician's horse is trotting the man's mind is working. He has only one ambition, to cure; only one desire, to relieve. He cares little for renown, for he is satisfied with having simply done his duty, and his clients give him for that less vexation than is often the lot of the city practitioner with his more pretentious patients. The country physician is therefore more prompt than his city fellow practitioner to welcome the dosimetric method and to swell the number of its ardent devotees. He is quick to see that this method does in reality not change the old medical practice which has endured for ages past and will endure because it rests on the enduring foundations of nature. Most of the new remedies he is using, too, are really not new by nature but only improved by the progress of

science and art in extracting the active principles from the remedies which he is familiar with for years past in his practice. The alkaloids and other plant active principles he uses now are the same, only more active, more reliable, more convenient than their parent plants. He soon learns to use their strongest remedies in proper dosage, and is no more afraid to use them than the skilful surgeon would be of a sharper knife in an operation. The only thing the country dosimetric physician is afraid of is the doing nothing with his safe and promptly acting remedies."

To me there was in alkalometry (the name I gave to dosimetry in this country) the yet additional moral inducement of its promise of reducing the sectarianism of the medical schools. Schiller, the immortal German poet, said he belonged to no sect-religion because he was a religious man, and so, because I am a physician, I belonged to no sect of medicine, and the alkalometric method of medicine afforded to my mind a system of therapeutics to which every educated and trained physician can readily subscribe. Educated physicians of the three great schools of medicine in this country, if they differ at all, do so in therapeutics, and so I had nothing to object to Burggraeve's idea of alkaloidotherapy. Nor was the idea of minimal and minute dosage foreign to me.



Dr. Epstein soon after he came to this country

My great teacher in therapy, Alonzo Clark, of the College of Physicians and Surgeons of the University of the State of New York, more than merely hinted at the idea of fractionated doses in his lectures and clinics in the fifties of last century.

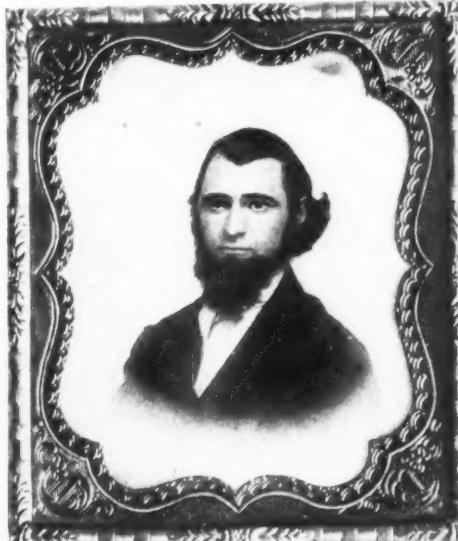
What was really new to me in this respect was the oft-repeating of the minute individually innocuous dose till the cumulated action of them produced the desired effect. The fact surprising to me when I saw it at my patients' bedside was that the cumulative action of a remedy could be so safely and so efficiently utilized in therapy, while I remembered the disastrous effects of cumulation with galenic preparations, notably with digitalis and veratrum viride. It gave me faith in the possibility of jugulating acute diseases at their start, a possibility which soon became a sure expectation by repeated happy results for my patients and reduction of my income.

The fact that the number of remedies was so small in the alkalometric *materia medica* as compared with their multiplicity in that of the socalled allopathic, eclectic and homeopathic *materia medicas* was just to my taste. It reminded me of my good old-fashioned Prof. Gillman, who said to us in his closing lecture on *Materia Medica*: "Gentlemen, these many remedies are all of them official, but my private *materia medica* is a great deal smaller, and so will be yours after a year or two of practice. And a mighty good thing it is that we can get along so well with so few remedies with which we become thoroughly familiar."

I should like, when I get warmed up with these reminiscences of times when I was twenty-five years younger, to write of my experiences with alkalometry in the various diseases which came under my care, but I am reminded that I must spare both myself and my readers. I will, however, begin with my experience with fevers.

First Experience with the Alkaloids

Fever.—Aconite-root tincture I had given in fevers for many years before, and many a vial of it I had broken for me in my medical pocket-case on my way to a patient, finding myself minus just what I wanted when I opened my moist-feeling case. When I was told that an aconitine (amorphous) granule of 1-134 grain would do well for a dose if I only repeated it sufficiently often till the pulse was reduced in frequency, I tried it on my next fever patient. But I was not confident enough of my new remedy so as to leave my vial with tincture of aconite root at home for



Dr. Epstein as he looked in his young manhood

the next few weeks—no, not me—for I always prefer to have a safe reserve. But the first trial proved a success and my supply bottle with *Tinctura Aconiti Radicis* remained an untouched sacred memorial of my conversion to alkaloidal practice. I do not remember a single case of disappointment with aconitine in fevers in all my subsequent practice.

What is fever? What causes it when there is no inflamed organ which we might blame for it? May it not be useful to talk a little while about it and ask how it is treated alka-

lometrically so successfully? Medical thinking ought to result in better medical practice, for medical thoughtlessness is the mother of routine, sectarianism, quackery, charlatanism, and a host of illegitimate sickly bastards.

There are various kinds of fever, such as ephemeral fever caused by transient gastrointestinal disorders, typhoid fever, paludic fever, the different eruptive fevers, syphilitic fever, several kinds of diathetic and dyscrasie fevers, and intoxication fevers. All these fevers are characterized by a more or less rapid pulse and higher temperature than normal.

The Pathogeny of Fever

The pathogeny of fever is variously conceived. Some think its origin is purely nervous, either from a hyperexcitation of the grand sympathetic or from a paralysis of the moderating nerve-center said to be situated at the union of the medulla oblongata with the pons. Others think fever to be the action of pyretogenic agents stimulating unduly the process of nutrition. You may accept the first or the second of these assumptions, or make a compound of both, yet one thing is certain, and that thing is most essential in the alkalometric successful treatment of fever.

It is to be remembered that no fever is ever a sign of a sthenic condition of the organism, but on the contrary, is always a sign of asthenia of the organism. And in passing let me say just here that the alkalometrist never treats medically a disease or a mere symptom of only an organ, but the entire organism, for "when one member (organ) suffers all the members (the organism) suffer with it."

Hence it is our (and I think exclusive) maxim that whenever a fever makes its appearance it is the imperious duty of the physician to sustain the patient's vital force for the very purpose of helping him to put out the fire that threatens to consume him now or ruin him for the demanding actions of life in time to come. I do not remember whether it was Burggraeve or some of his early followers who coined the dosimetric

slogan: *La fièvre, voilà l'ennemi!* Yes, "fever is the enemy!"

And it is not often that this enemy is conquered by the vital powers of the patient, which in our day and especially in the unhygienic conditions of crowded localities is not to be relied upon, nor is it in better-conditioned localities, but in individuals debilitated by luxury, overwork and the results of vice, both unavoidably and unavoidably inherited. Leave a raging fever to run like a prairie fire through the organism of some country alcoholic, or a city factory hand, or a hereditary-syphilis-tainted child, or a gonorrhœal infected woman, fold your arms, do nothing, prescribe bread pills, and complacently affect profound contemplation on the "*vis medicatrix naturæ*," and ten to one, you lay there the sure foundation for future medical practice. This is the masterly practice of scientific (?) do-nothingism!

Value of Veratrum Viride

Before I was an alkalometrist I was not a medical nihilist. I gave in fever my orthodox calomel and jalap, or later on podophyllin and leptandrin, for to clear the bowels in fever is old orthodox practice, purposely neglected by homeopaths only of strict Hahnemannian observance in my younger days. I gave also tincture of aconite root as a liberal concession to the doctrine of *similia*, and when it did well I congratulated myself on my liberalism, and when the case went wrong I blamed the phantastic hyperminute doses. Bleeding I did not much, not even in pneumonia, for I early learned in my practice the substitutional value of Norwood's tincture of veratrum viride for venesection, and I even had the honor of introducing this preparation into the practice of the General Hospital of Vienna, through the late great Dr. Oppolzer, when I was an interne there in the sixties of last century.

Yet, for all that, I do not wish to be understood as being an unconditional antivenesectionist. There are cases in which venesection is imperatively indicated, and it would be practised, too, if our younger physicians knew how to do it. Let us hope that the

great advance of surgery in grand things will condescend to teach the present and coming generations of physicians this humble but useful minor surgery of venesection.

The Norwood's tincture of veratrum viride is certainly good in pneumonia but not any better than any other tincture in other febrile diseases. It will leave you sometimes in the lurch while at other times it will scare you to death, an observation you will begin to associate with your patient. And all this no matter how you administer the drops, whether many drops initially, then diminish their number, and the intervals, too, or fewer drops from the start and repeat at longer intervals. And, oh, what a pleasant surprise was the steady action of the veratrine granule, grain 1-134, to me when I first administered it in pneumonia, beginning with half-hour intervals and then longer and longer ones!

The question what the diet of a fever patient should be—whether a starving diet and so starve out the fever, or a generous one and so run the risk of nourishing the fever—was never clear in my mind till I learned the wonderful power of strychnine and its milder brother, brucine. I have known strychnine as an antiparalytic muscle remedy. But I know it now that it is pre-eminently a vitality-sustaining remedy, and our friends the enemies of other schools have learned it from French dosimetrists and American alkalometrists.

The Import of the Sympathetic Nerve

There is a wisdom (I prefer the simple word "wisdom"—Greek, *sophia*—to the pretentious compound *philosophia*, "friends

of wisdom," as though you and everybody else too were actually friends of wisdom), there is, I say, a wisdom in the use of strychnine in fever patients, founded upon the discovery of the great French physiologist, Claude Bernard of the last century, as to what the action of the great sympathetic nerve really is. His disciple, Mathias Duval, states that discovery in an admirably succinct way in these words:

"There exist two species of vasomotor nerves, viz., the vasoconstrictors and the vasodilators. Experimental experience shows that in connection with these two motor actions there are also two kinds of thermal phenomena, that the dilator nerves are at the same time *calorific*, heat-makers, while the constrictor nerves are *frigorific*, cold-makers. The nervous system seemed before and at first sight to be related to calorification only, the same as it is related to nutrition, and that is by the intermediate agency of the



Dr. Epstein in the uniform of an officer of the Austrian navy

blood circulation. But the experimental experience of Claude Bernard has led him to see an action in the grand sympathetic which differs from that of vasomotor action, and that this action has as a consequence a controlling activity (*suractivité*) in the chemical changes of direct heat production. And inversely, too, it is not only because the nerves contract the blood-vessels that the vasoconstrictors produce the cold, but it is because they bridle and restrain the chemical movements of nutrition. In a word, the grand sympathetic exerts, apart from its vasomotor action, also a thermic action, a calorific action by means of its vasodilators and a frigorific action by its vasoconstrictors." ("Cours de Physiologie.")

It is evident, therefore, that we have in fever an excited condition of the grand sympathetic occasioning the paralysis of its vasomotor nerves and in consequence an abnormal elevation of the temperature of the entire body, due both to this paralysis and to the usual calorific action of the ganglionic nervous system.

The Rational Course for Fever

What, then, is to be done in the case? Wisdom says: "Tonify this nervous system! Remove the temporary paralysis of its vasomotor nerves! What with? Why? What were you taught to give in paralysis? Was it not strychnine? Then give it here, too. But not to children; for them the milder brucine is safer. Strychnine is a sustainer of vitality, and vitality always is the enemy of the body's enemies.

But strychnine is the remedy for only one indication, important as it is. And there are other indications. The body is on fire, the pulses beat, the heart is excited, the capillaries are congested; these call for aconitine. Give amorphous aconitine, grain 1-134 every ten, fifteen or thirty minutes, till you see an effect in a reduced pulse-beat and a steadier heart action. This same aconitine has also a great tonifying effect on the sympathetic and opposes the paralysis of its vasomotor fibers and so helps to decongest the capillaries and so to reduce temperature.

I soon learned to appreciate these wise reasonings, and the "Manuals" of Waugh and of Shaller and of Castro gave me the opportune counsel I often sought from them. They taught me how digitalin is to be han-

dled as a cardiac in fever. I used to fear the cumulative action of this remedy which comes on you like a mad dog without a bark and from behind all on a sudden. What a veritable revelation were, then, to me the words: "The active principle (digitalin) in minimal fractionated doses, often repeated till effect." I obeyed the voice, and I never regretted it. I gave at first these remedies each apart, and they did well, but I soon found that a combination of the three, strychnine, aconitine (amorphous) and digitalin do far better at a certain stage of the fever than aconitine alone, which latter may be continued by itself for some time, if not contraindicated,

and at long intervals when that triad (I dislike the profane use of the term trinity) had produced the effect desired.

I see I have written long and must bid me enough! But I cannot close these reminiscences without this honest confession, that never before in my practice, which began in 1850, did I have that confidence in medication and

medicaments as I gained, and never lost, since I began to use alkaloids, including glucosides, resinoids and concentrations, and the alkalometric (dosimetric) method.

Were I younger and were there many years of life, humanly speaking, before me, they would be devoted to the service of the alkalometric cause. Whoever works in this cause works not for himself but for God, for Truth and for Humanity.

And wishing my readers a Happy New Year, I remain,

Fraternally theirs,
EPHRAIM M. EPSTEIN, M. D., A. M.



Spotted Weasel and his wife, and Henry Bad Gun (See next page)

Reminiscences of Medical Practice Among the Indians

By JAMES L. NEAVE, M. D., Dresden, Ohio

II

SO far as obstetrics is concerned there was not much doing, that is, not for the doctor—and I cannot say that I was very sorry. This line of practice also had its peculiarities which I was glad to be permitted to understand. Outside of emergency-cases I was never called to attend a childbirth. When I did get a call I would always be certain of something interesting. The woman never lay on a bed but upon a pallet on the ground; and all attendance was performed kneeling.

What the procedure of the Indian attendant at such a crisis was I could never ascertain. This much I did learn, however. When the Indians were on any of their travels and the woman was taken with the pains of labor, it was customary for some old woman to stay with her, while the rest moved on. This old woman squatted on the ground with her back against anything solid—a tree if one was handy. The woman to be delivered sat down in the space formed by the old woman's spreading thighs and her back against the breast of the attendant, who, clasping her hands over the parturient's abdomen, literally squeezed out the child. Everything generally came away at once, and the new mother, picking up her new-born babe, they hurried on after the moving body of Indians.

Some "Lightning" Labors

Our washerwoman, Two-Bears by name, whose home was a mile from our house, came to my wife in the middle of one afternoon and said she wanted to go home as she was in labor, the water having broken. She walked one mile, reached her home, when the child was born just as she entered the doorway. She sent word that she would be at our house on the following day and do the ironing—but we thought best not to let her me.

At one time the trader, whose store was on the edge of the village, saw a group of Indian women coming toward the store, each carrying a load of fagots on her back. Suddenly one of them stopped, threw down her load, spread apart her legs, strained a moment, then drawing her knife from her sheath made a quick pass in front of her, down toward the ground, picked up something, and passed on into the village, leaving her bundle of fagots for someone else to take care of. That was a confinement!

At another time I was called to the house of a prominent Indian whose wife was unable to complete her confinement. I found her lying on her pallet on the ground, the child removed and the placenta retained. The cord was tied to her thigh by a piece of string to prevent its being sucked up, and I was not permitted to untie this string. I found the placenta firmly held in the womb. I explained to them that I should have to use chloroform and remove the placenta by introducing my hand.

Delivering a Woman Under Armed Protection

Some of the Indian medicine-men who were in the house professionally demurred and requested me to give the woman some snuff so she would "sneeze it out." I persisted in handling the case in my way and they sought to prevent me by forcibly ejecting me from the house. Finally the husband turned to me and asked me if I would be just as careful in handling his wife as I would be if it were my own wife whom I was treating. Receiving an affirmative answer he told me to go ahead, and then stepping between me and the medicine-men, he drew a big 45-caliber Remington revolver and told them he would kill the first man that made a move toward interfering with me—and he meant just what he said, and they knew it. I introduced my hand into the uterus under chloroform, overcoming an hour-glass con-

traction, by the hardest kind of work, and removed the placenta successfully. My patient eventually recovered without any untoward symptoms. This was my first and only experience in doing work of this kind under the protection of artillery.

Abortions and How Produced

Abortions were frequent among these people. The method was simple enough. With the patient lying on the pallet, two

the testimony of these women. I did not witness the occurrence myself.

One Indian woman who was frequently in the habit of getting rid of babies by the abortion-route once tried a new method. She seated herself on the bottom of a heavy farm wagon, directly over the hind axle, and then had an Indian drive rapidly for some miles over the roughest ground he could find, rocks preferred, wherever he could strike them. She succeeded in accomplishing her object, but the operation so injured her that she died not long afterward.

Many of the Indian dead were "buried" on scaffolds standing six or seven feet high. The cemetery lay close to our village, and I often passed through it. As did others before him, a young New Yorker who was visiting the Agency thought it very strange indeed that I did not possess an Indian skull, when they were lying about on the ground and could be had by simply picking one up. I told him that it was not lack of interest on my part that I had no Indian skull, but it was because I put a greater value upon my own, alive, than upon an Indian specimen, dead. I advised him to let them alone, as it was impossible

for him to get one, unperceived, and it would be disastrous to himself.

One day he came into my dispensary, white as a sheet and shaking as though with the ague. After encouraging him with a free exhibition of whisky I got his story. He had intended returning to New York with an Indian skull, despite my warning. So, supplying himself with a grain-sack, he passed through the cemetery afoot, when there was not an Indian in sight. Passing close to a good specimen that he had previously noticed, he quickly popped it into the sack and started on almost without a halt. He had gone but a step or two, when he heard the exclamation, "Huh!" and glancing in the direction of the voice, found himself covered by a Winchester rifle, aimed by an



A Half-Breed Interpreter and a Full-Blooded Crow Indian

women, selected for their brawn, knelt one on each side and literally kneaded the woman's abdomen with their fists until they forced and completed the abortion. The fetus would be wrapped up in some heavy cloths and placed in the branches of a tree that stood some distance from the Missouri River. And this tree was a sight—hanging full with that kind of fruit; showing the frequency of abortions. In course of time, the Missouri cut its way toward this tree, until it was finally undermined, toppled into the stream, and was carried away by the current. As the tree fell, all the abortion-babies screamed. I have the word of some of the squaws for this statement. They were watching the tree as it fell, and they bore witness to the screams of fright. I merely give

Indian who lay at full length on the ground, making a downward motion with one hand. I asked him, "Did you drop the skull?" My friend cheerfully acknowledged that he did. Then I asked him to tell me what the muzzle of that rifle seemed like when he looked down it. His reply was, that it looked as big as a flour-barrel. I came away from that region with only my own skull; and my professional friends will understand why I remained satisfied with that alone.

The Indian's idea of medicine differs from ours very materially. Our medicine is supposed to be taken internally, in the treatment of disease. Their's is supposed to work by the charm-method, and is used externally. At a certain time during the hot summer months the medicine-men collect branches from certain trees and shrubs, those having odor preferred, and place them out on the open prairie in the hot sun. Then they sit solemnly around, in a circle, silently smoking. When the leaves are sufficiently dry, the head medicine-man arises, blows the smoke from his mouth, and waves his pipe to the four quarters of the compass and to the zenith, propitiating the Great Spirit. Then the dried leaves are collected mixed up and broken between the hands, put into bags, and distributed, one each to the medicine-men in the circle. Then they are ready to combat disease.

Called in to see a patient, they take a skillet and put in some live coals; then, after sprinkling a pinch of the dried leaves on the coals, they pass the skillet under the blanket covering the patient, permitting the smoke to pass over the body. Some element in the mixture of leaves is supposed to have a remedial action on the special disease they are treating. All they have to do is to smoke up the patient. Or the sweat-house will be used—the patient after being thoroughly sweated sometimes taking a plunge into the river, even in winter with the thermometer

below zero. The sweat-house and plunge-bath in the icy water was their treatment for smallpox—and it was invariably successful in killing the patient. Occasionally they would omit the bath, and would simply walk home, dressed in a bed-sheet.

The sweat-house was made by covering a circular frame work of willows, maybe six feet in diameter and four feet high, with skins or quilts. Into this they would pack as many Indians as could be accommodated.



Black Tongue the Head Medicine-Man

The medicine-man was inside also, sprinkling water upon heated stones, to make steam. Consumptives, fever-patients, victims of syphilis in its various forms, no matter what affliction anyone had, all were huddled together, naked. Sanitary? I guess not.

How the Sick Were Allowed to Die

Regarding the wind-up of serious cases. The Indians did not like the idea of anyone dying in a house, on account of the spirit pottering about ever afterward. So I have known them, when they were certain that death was almost at hand, to take the sick one out of doors and let him die there. I have seen a patient, dying of pneumonia, placed in a shed open on three sides, just outside the door of the house, and allowed

to draw his last breath there, with the thermometer twenty-five below zero.

But speaking about exposure to cold, I have seen children ten years of age playing whip-top under a similar shed, with the temperature just as low, and they without a particle of clothing on their little bodies. And they were enjoying themselves and did not get sick either. Also I have seen men seat themselves out-doors in the sun, with their backs protected from any wind with a buffalo robe thrown loosely over their

I do remember once pulling a tooth for an adult Indian. He came to my dispensary, bringing with him his squaw as well as a good-sized toothache—at least I at first supposed that he brought the squaw, but as a matter of fact the reverse proved to be the truth. I found a decayed molar in the ruddy gentleman's mouth, and I at once proposed extraction. I hid the forceps in my hand and approached the patient. He demanded to see the forceps and refused to let me do anything unless he was permitted to see. At last I showed the instrument to him, whereupon he let out a roar, sprang from his seat and out through the doorway, and sprinted for home, with his squaw after him. When his faithful spouse had caught him, she drove him back, using force and plenty of language. Returning, he collapsed into a chair and opened his depot to its fullest extent. I got the tooth all right, but he gave one prolonged yell and rushed toward his wigwam, running like a deer, howling at every jump, and the woman after him, with her tongue operating as fast as her feet. She didn't catch up with him this time—and he may be running yet, for all I know to the contrary.



Bastion of the old blockhouse, Fort Berthold, N. D.

shoulders, entirely exposed in front, and clad only in breech-cloth and moccasins, with the thermometer ranging around 20° below zero—and they sat there and smoked. Certainly they did look cold to me.

I have remarked about Indians not bearing pain well. However, if they are nerved up to it under the excitement of some religious rite, they will bear the most terrible pain without flinching. Or if a prisoner is tortured by his captors, he will bear pain stoically, because that is a matter of pride, he considering himself disgraced should he flinch then. But place an Indian in a position where there is no glory to be obtained by a manifestation of bravery, and he simply will not stand any pain whatever. He won't permit the use of a knife under any circumstances; and I don't remember ever having used one, for any purpose.

The Indian Sun Dance

If the Indian can make a spectacle of himself, and prove himself a "brave" by means of a semireligious ceremony, then he can stand pain. As witness the sun-dance, happily now prohibited by the government, which may be described.

The candidate for honors prepares himself by fasting for several days. At the appointed time he is stretched out on the ground upon his back. Two medicine-men kneel on either side of him and each with his knife cuts two parallel gashes, two and one-half to three inches in length and about one inch apart, through the skin over the pectoral muscles. Each medicine-man dissects up his strip sufficiently to pass a rawhide lariat readily beneath. This is done, the lariat being tied strongly in a loop. The candidate is then allowed to get up, and he is conducted into the especially prepared medicine-lodge, a huge affair, constructed like a dirt

lodge, already described, only instead of using dirt an extra-heavy covering of branches is laid on. The free end of the lariat is now tied to the top of the medicine-pole, fifteen feet above his head; and he is permitted to dance about, throwing his body back and straining on the lariat until it finally tears itself loose through both strips of skin—and he is not permitted to ease the strain by taking hold of the lariat with his hands.

This performance lasts for hours, and the reader can imagine the effect on the candidate, both mentally and physically. The candidate is worked up to a perfect frenzy, hardly capable of knowing what he is doing. The lodge is closed except for the opening at the top; piles of brush are kept constantly blazing, making the only light, barring what little filters in at the top through the smoke; the place is crowded in every available spot excepting in the center; the drums are beating monotonously; some hidden squaws are chanting a wild, wierd, monotonous, tuneless chant; the flickering fire-light; the suppressed excitement; the peculiar sounds; the almost maniacal candidates, dancing about at the ends of their lariats; the circle of eager faces, showing wierdly in the fire-light; with the wavering appearance over all, caused by the smoke and heat. It is a picture that impresses itself indelibly upon all who have been so fortunate (?) as to have witnessed it.

Other Methods of Making "Braves"

I was told of another method that was occasionally resorted to for making "braves" in the sun-dance. This was the insertion of hooks into the small of the back; the candidate then being swung up like a spider and allowed to kick until free. I did not witness this style, however, and know that the former method is certainly the more popular one. Either is horrible enough and seems to represent the limit of human endurance.

Sometimes outraged nature rebelled, and endurance was strained to the breaking point—the candidate sometimes fainting, and rendered unable to continue—sometimes nature absolutely refusing to permit the candidate ever to finish.

Another trial would be allowed the following year, if the candidate desired; when, if he went through the ordeal, he won the



Dirt Lodge in the Indian Village, Fort Berthold, N. D.

coveted title of "brave." Once the trial was undertaken, the candidate was bound to complete it, in either the first or second trial. If he finally failed, he was forever driven from association with men, and was condemned to dress like a squaw, work in the fields with the squaws, and be with them for the remainder of his life. And this banishment had no sexual compensation with it, either.

I was never able to ascertain exactly just what was done with these luckless victims, but had reason to believe that mutilation—castration—was resorted to as punishment for failure, and to prevent anything from happening on account of this intimate association with squaws. There were three of these men-women in the village where I was located. They all had high-pitched

voices. I had occasion once to make a manual examination near that region and tried repeatedly to obtain ocular or manual information, but was carefully blocked every time. Neither could I get any information from the half-breeds who could talk good English. The subject evidently was taboo; and everytime I tried for information I got a different story.

After the Government's prohibition of the sun-dance I witnessed a modified form of the ceremony. This time there was no lodge built, but everything was done out of doors.

One set of candidates had their skin slit on the chest, as before described. Two lariats were used; one tied through one loosened skin ribbon, and the other, fastened the same way, through the other side. One horseman picked up one lariat, and another the other one, and they rode around and around, holding the lariats taut, with the candidate dancing and jumping between them, until the ropes tore their way through. Another set of candidates had the skin ribbons raised on the small of the back, the lariat run through and tied, and on the free end of the lariat was tied a buffalo skull. The candidate jumped and ran about with the skull bumping over the prairie's knolls until the thong tore out. Yes, they could stand lots of pain if the occasion was sufficiently spectacular.

The "Graduation Ceremonies" of an Indian "Medical College"

I attended a session of their medical college at one time and witnessed the graduation ceremonies, which were unique, to say the least. The ceremonies that I was allowed to see occurred in the large open court in front of the big medicine lodge. The candidates were inside the lodge, and all I could hear was a great deal of noise coming from the big gourd medicine-rattles. Suddenly a number of young men, entirely naked excepting for breech-cloth and moccasins, came dashing through the skin door, with every manifestation of alarm. After running about a few moments in a confused sort of way, they as suddenly dashed up on top of the medicine lodge, where they lay

down at full length. Next, certain attendants dashed up to the doorway, having branches in their hands with which they beat the ground, raising as much dust as possible. Gradually they retreated, and out through the doorway, leaping and throwing his arms, dashed the devil ("evil spirit" the Indians call him).

Certainly this make-believe devil looked like Old Nick himself. He also was naked like the others, but he had an entire buffalo hide, head, horns and all, attached to his head, with horns in place and the robe and tail streaming out behind him. He was frightfully painted, had two long peeled willow tusks protruding downwards from the upper jaw, and was emitting something from his mouth that looked like dull red fire and smoke. As soon as he came thoroughly into view, the students immediately rolled off from the medicine lodge, down to the ground, and lay about in all directions, in convulsions, retching and going through the motions of vomiting and acting as though their entire insides would come up; and kept this up while the devil cavorted about the court. Finally the horned gentleman disappeared into the medicine lodge, the attendants ran up to the still struggling students and beat them with their branches, and then suddenly they all sprang to their feet and rushed through the doorway into the building. This performance was repeated several times.

The rest of the rites were out of sight of the audience, we being able to hear only plenty of rattling from the medicine-gourds. But the class were graduated before they came out and became full-fledged medicine-men, fully equipped to practise their rites upon any unfortunate desiring to be humbugged.

Eye Troubles and Their Cause

Two sources of irritation about the eyes were sandstorms in summer and snow-blindness in winter. The sandstorms were caused by the wind picking up the sand along the river—which was always low in summer, exposing miles of sand bar—and so filling the air with the sharp, fine grains

that nothing was free from these flying particles. A person out in one of these storms was sure to suffer in the nose, throat and eyes, particularly the latter; and unless care was taken the irritation of the eyes was likely to become serious. The Indians were the opposite of sanitary and were careless in the extreme, and suffered accordingly. The best way to avoid these storms was to remain indoors while they lasted, which was usually two or three days. The only redeeming thing about a sandstorm was that it did not come in a hurry but gave notice, as it were, of its appearance.

Snow-blindness was a catastrophe. The writer had one pronounced attack and knows whereof he speaks. The experience may be something to refer to, but he does not want any more of it. The sensation is as though someone had his thumbs under the affected eyeballs, and was trying to force them out of their sockets. The only relief that I obtained was the free use of morphine to relieve the terrible pain and the application of a bandage about the eyes, tied in a single knot behind the head, and then constantly drawn tight to make pressure on the eyeballs in order to counteract the sensation of the eyes being pushed out.

Snow-Blindness and Its Effect

The effects of the snow-blindness seem to be lasting. To this day the writer has to be careful about being out very long on a bright winter day, with the sun shining on the freshly fallen snow. There remains an inability to withstand long the glare and it becomes necessary to resort to smoked glasses for a few days until the snow becomes dirty and the glare lessens.

Snow-blindness is caused, of course, by the sun shining brightly upon an expanse of snow where there is no shade to break the glare. In Dakota, where I was stationed, there was, except immediately along the river, an entire absence of trees to throw a shadow; no houses except at certain points; no bushes; no anything to break the glare. The country was almost a dead level and the horizon was unbroken by hill or bluff. The snow was glaringly white, the cold was

so intense that there was no surface melting at any time during the day—30 below zero was frequent, and from there down to 50 below zero, while 20 below was common. The frost spangles remained on the snow all day, dazzlingly beautiful, but terribly irritating after awhile.

When conditions became aggravated by being exposed to the glare for a time the approaching attack showed itself as follows: I seemed to be on an immense level, white expanse, sparkling, glittering, apparently waving, with a brightly shining dome covering everything like an immense inverted bowl, and turn which way I would, the sun like a ball of fire was apparently suspended directly before my eyes. Sharp pains *as of arrows* soon began shooting through the eyes and I was glad to get into the house and into the dark and stay there for several days. With the Indians the results are generally permanent, and I found colored glasses to be in common use—in many instances worn constantly the year around.

I saw one white man suffering with an attack of this trouble. He lay face down in a wagon, covered head and all with a buffalo robe and suffering the tortures of the damned. He let me have just an instantaneous glance at his eyes. They looked like raw beefsteak. He was merely being taken through the Agency and I had nothing to do with the case beyond giving him an opiate to relieve him partially until he could reach his destination.

Insanity Is Rare Among the Indians

During my seven-years' stay among the Indians I saw but one case of insanity. Even this one could hardly be credited to that race as the woman was of mixed blood, with considerably more white than Indian blood in her veins. The woman always seemed happy, never in a bad humor, whatever happened. She had a great desire to get into someone's house. She would appear suddenly at the Agency and walk rapidly around and around the houses, trying first one door and then another, keeping it up for hours at a time; then would disappear suddenly as she appeared. One evening while

my wife was lying on the bed getting our little one to sleep, she was startled upon glancing up to see "Mag" leaning over the footboard, smiling affably. She had come to sell a pair of crazily made gloves.

One bright moonlight evening, the thermometer 30 below zero, my door suddenly opened and in walked crazy Mag just as though she belonged in my house. After quite a time I got her started homeward and resumed my interrupted reading. I had hardly got settled when there was a startling rap at my door and I found a relative of Mag inquiring for her. Upon my telling him that I had started her toward her home, a mile distant, he disappeared on a run to find her. In a very short time he returned with a two-horse wagon, the horses on the run. Hurriedly notifying the agent of his intentions, he drove through toward the military post, seventeen miles distant, traveling as rapidly as he could force his horses, and found Mag sitting at the fireside of one of the officers, happy and contented. Instead of continuing on the way home she had turned back, passed through the agency, walked the entire distance, losing one of her moccasins on the trip, and had reached the post some time ahead of the rapidly driven team following on her trail.

Trouble with "Mag"

Again the woman came to the agency one winter afternoon and took possession of the office. The first I knew of it, one of the employes came running to my house and told me that Crazy Mag would soon have the office afire unless I could use my influence to get her away. I immediately crossed over and found the situation dangerous indeed. If the office caught fire, it meant the probable destruction of the entire lot of agency buildings, as we were without fire protection. And this in the dead of winter would have been a catastrophe. The stove in the office was a huge sheet-iron affair, at least two and a half feet in diameter and more than four and a half feet high. The room was a low-ceiling affair, sealed throughout with matched flooring boards, the stove-pipe running through the ceiling into the

room above. The fuel used was cottonwood logs, inflammable as pine.

I found Mag in the room in perfect good humor and enjoying herself. She had filled the stove with fuel, standing the pieces on end so as to facilitate burning. The stove and the pipe were red-hot, the ceiling smoking and just ready to break into a blaze. Mag was engaged in putting in more wood, and with her knife in her hand threatened to kill anyone that dared to interfere. Nobody ventured to lay a hand on her; no one dared knock her down, as that would mean the probable massacre of all the whites at the agency. Quick action was needed and there was no time for parley. I was the medicine-man and felt I could do what no one else could, and I took the chance. I walked up to her, addressed her quietly in her own language, and placing my hand on her shoulder told her I was going to her home and that I wanted her to come along. She immediately put her up knife into its sheath and said she would do anything I wished her to do; and I got her out and delivered her over to her people.

One of the other queer escapades involved one of her own people. She invited the old interpreter into her house to have some soup of which Indians are especially fond. He accepted the invitation and partook of dog soup, as he supposed. When she undertook to ladle some more out for him he discovered a child's head bobbing about in the kettle. Mag had dug up a baby that had just been buried, had cut off the head and made soup of it; and had the dead body wrapped up and cared for as though it was her own baby and alive. There was a sensation just about that time. Poor Mag was eventually frozen to death. In some aberration of instinct she had evidently lost her way one night and was found the next morning lying dead on the bluff near my house.

These reminiscences might be continued, but enough has been written to illustrate that practice among these people has its peculiarities. While some portions of this narrative are not strictly medical, they have been written because of their bearing upon practice among these people.

Drug Treatment for Gall-Bladder Troubles

By EDWARD A. TRACY, M. D., Boston, Massachusetts

Orthopedic Surgeon to Mt. Sinai Hospital

IT may seem strange for an orthopedic surgeon to write upon this subject; an explanatory word or two, therefore, may not be amiss. For several years the writer practised general medicine, taking particular interest in orthopedic cases because of the bent of his natural inclinations, until from one cause or another the larger part of his practice is now in orthopedic work. Interest in general medicine, however, has been retained for several reasons: the subject is so large, furnishing endless problems for consideration, that it is ever interesting; treatment by active principles is productive of such positive therapeutic results; old patients continue to come for general treatment, and while memory lasts the patients who entrusted themselves to us in our early days of practice will command our best service to the end. So that as a general practitioner I may fairly have the privilege, indeed, it seems an obligation, to write on the subject of the medical treatment of gall-bladder troubles.

Some of the Difficult Cases

For the most part these are gallstone-cases; but in the individual case it is sometimes impossible to determine that a gallstone is at the bottom of the trouble. Maurice H. Richardson, Boston's brilliant surgeon, has operated for supposed gallstones and found an acutely dilated gall-bladder without a gallstone anywhere. He has also found gallstones where there were no symptoms of the trouble.

A gall-bladder case may be considered one in which there is gastroenteric disturbance associated with well-defined tenderness in the region of the gall-bladder. Fever, pain and vomiting are frequently present. Jaundice or yellowness of the conjunctivæ, or bile in the urine, each or all may or may not be present. When present, any one of these signs is important from its usual connection with abnormal distribution of the contents

of the gall-bladder—bile. Differentiation of the gastrointestinal symptoms from those produced by neuroses and diseased conditions of the stomach and intestine is made chiefly by the well-defined area of tenderness in the region of the gall-bladder, together with absence of such tenderness in other parts of the belly usually affected by appendicitis, gastric and duodenal ulcers, oophoritis, salpingitis, etc.

The Gallstone Colics

Not rarely we are introduced to such cases by an attack of gallstone-colic. Good treatment for this, and in fact all colics, is hyoscymine or atropine, glonoin and dioscorein, all given to effect, the object being to obtain relaxation of the involuntary muscle-fibers of the tubes affected by the colics—ureteral, intestinal, or gall-duct-tube, as the case may be. The terrible pain is caused by the spasmodic contractures of these muscles and ceases when they relax.

At the commencement of treatment sometimes morphine may be advisable, in which case the combination of hyoscine, morphine and cactin works well in quelling pain and producing rest.

The stomach needs sedation and aerated Vichy water or plain soda (carbonic-acid) water with grape juice is found grateful. The bowels should be kept emptied by a saline laxative; the diet should be carefully attended to, albuminooids being given sparsely, while fats are not well borne. Boldine is of real value in bringing about a normal action of the liver, gall-bladder and the duct.

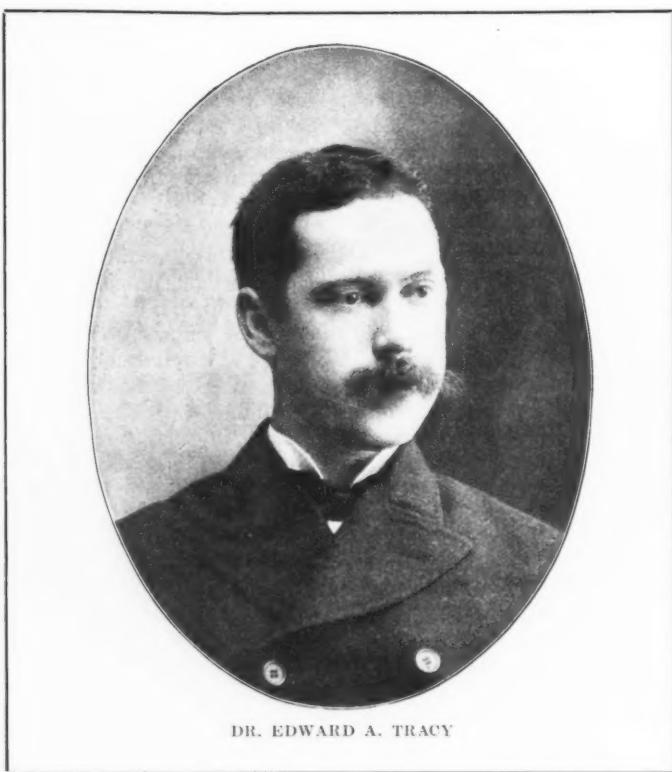
Sodium Succinate Is Curative

When the acute symptoms have disappeared, sodium succinate has a curative action in these cases. It should be given in 5-grain doses dissolved in a glass of water, every three hours during the daytime. This agent should be used faithfully from ten to twelve months. During the past ten years

I have employed sodium succinate in the treatment of at least a dozen cases of gall-bladder trouble, most of them diagnosed as gallstones, with good results in all of them. I submit the last case treated, the details of which are fairly fresh in memory, as an example of these cases. The notes of this

disturbed more or less with gas in stomach and bowels; also with irregular action of bowels induced by an acute gastroenteric attack.

"Two weeks ago a chill followed by pain in epigastrum and right hypochondrium; confined to bed. Seen by Dr. Tracy Nov.



case containing the history together with the signs and symptoms observed by me diurnally, and the medication given, were inadvertently destroyed. However, Dr. R. H. Fitz, who saw the patient in consultation, kindly furnished me with an abstract of notes on the case, and this is here appended:

"E. M. H., real-estate business, age 52 years, single; good family history; no severe illness or accident; good habits; moderate use of tobacco and alcohol; average weight 190 pounds. For past thirty years has been

6, after an attack of vomiting. Temperature, 102.5°F., pulse 120. Moderate tenderness in region of gall-bladder. Next day temperature normal, pulse 88; urine, 1020; no albumin, dark-brown, froth greenish; feces whitish; chilly; vomiting; increased tenderness near gall-bladder. November 8, temperature slightly elevated, pulse 96; no definite cutaneous jaundice but conjunctivæ slightly yellow. November 10, chilly, vomiting; wakeful; epigastric distress; no pain. Today better; but slight tenderness in deep

pressure in region of gall-bladder; no tumor; no hepatic enlargement. Diagnosis: acute cholecystitis (gallstone?)."

Operation was considered and advised against. Under the treatment outlined above the patient recovered from this attack. Since then he has had two milder attacks, one of which was due to indiscretion in diet. He has been entirely well for seven months. He has continued taking from the first sodium succinate and boldine. From observation of the action of sodium succinate in similar cases I believe that in the future he will continue free from trouble of the gall-bladder.

About Dr. Fitz, the consultant in this case, let me say a few words. The writer had the privilege of being a student in pathology under him at Harvard, in 1890-1. His contributions to pathology and diagnostics make his fame secure for all time. His work on appendicitis (the very term was introduced by him in 1886) and pancreatitis is brilliant. The students under him were taught accurate observation and clear thinking by example. Many times have I been fortunate in having him for a consultant, and it has always been an intellectual treat to witness his thoroughness of examination, both into the history and into the condition of the organs. Thoroughness, united with a logical mind, is doubtless the secret of his greatness.

Drugs vs. the Knife in Gallstone-Cases

A further word may be permitted me, though outside the scope of the title of this paper, a word on gall-bladder surgery. Much of it is being done. Good will come of it in settling the limitations of surgical intervention in this field. Only surgical enthusiasts, blind to the clinical experience of others, will assert that the knife is the sole remedy for the above conditions. Richardson has advised drug-treatment after op-

erating for gallstones, to prevent the need of a second operation for recurrence of stones. I have no doubt of the efficacy of such treatment in the prevention of gall-stone formation, and further, I agree with able clinicians who have seen gallstone-cases favorably influenced, in fact cured, solely by drug-treatment.

How Does It Act?

Waugh, of Chicago (to whose writings the author owes his knowledge of and experience with the sodium-succinate treatment outlined above) doesn't explain fully the action of the remedy in these cases, and is skeptical of the solution of the stones ever being effected. It seems to the writer that there may be some solution of the stones effected. Knowing, as we do, somewhat of the solvent powers of the blood and fluids of the body, it would seem somewhat dogmatic to assert that such solution is impossible or improbable. This is a question, however, that may be settled in the not distant future.

At a recent meeting of a local medical society, Dr. Percy Brown, the Boston specialist in x-ray work, gave an exhibition of x-ray plates showing beautifully some abnormal conditions of the stomach and bowels, defined through the progress of a bismuth meal through these viscera. In the general discussion which followed, the writer suggested, as Dr. Brown had stated that x-rays diagnosed gallstones, that the method be used to determine the ratio of individuals in the community with gallstones without symptoms. That there are such cases the pathologists teach from the finding of gallstones in the dead, who gave no symptoms of them during life. I would further here suggest that the method be used on patients with gallstones to watch the effect of sodium-succinate treatment. If the remedy has a solvent action, the x-ray plates would show it.



Therapeutic Progress

By WILLIAM FRANCIS WAUGH, A. M., M. D., Chicago, Illinois

Dean and Professor of Therapeutics, Bennett Medical College

ASURVEY of the field of therapeutics for the year 1909 does not reveal any startling or even very important advances. The usual number of fads have arisen, the usual sensations have been sprung, and we have run off the straight and narrow path to Truth into the inevitable byways and blind leads. "Man is prone to evil as the sparks to fly upward," and this is well exemplified by the course we doctors take in regard to therapeutic innovations.

The rule still stands that real advances are met with instant opposition, whose vehemence stands in direct ratio to their importance. If they go so far as to disturb the foundations of preexistent belief, the opposition becomes intolerant and the innovator who dares penetrate deeply beneath the surface the conventional belief is persecuted. Prometheus still scales the heavens to bring fire down to men, and is chained to the rocks and prey to the harpies as his recompense.

The Old Way, and the New

Along the line of drug-therapeutics there has been a steady but quiet advance. The struggle is between the old conception of specific remedies for each disease, and of regulators for disordered vital function; between the set prescription applied as a therapeutic entity, and the special application of single remedies to meet well-defined needs. The old ideal creates a new remedy with every fresh combination of the multitudinous members of the *materia medica*, and thus burdens the mind of the doctor with an unbearable weight. The other teaches him to know thoroughly the powers of each single remedial agent and combine them himself to meet the needs of his patient at the time of his visit. The old method places the doctor under the domination of the manufacturing chemist who urges his latest conglomeration on the doctor as "good for everything under the sun," and by persistent advertising

forces it to the front, crowding out of sight the remedies that have no commercial interests back of them. This necessitates monopoly, for no remedy that is free can possibly pay for its advertising, and those who advertise open remedies spend their money for the benefit of the drug trade rather than for their own.

The old way inevitably led to pessimism, and this to therapeutic nihilism. This was a necessity to clear the ground of a mass of rubbish that prevented any attempt at rebuilding. But pessimism is an unnatural state, and could not long dominate the human mind.

Reaction commences with the study of single remedies. By these we mean those that are indeed single, uniform in their nature and unvarying in their action. No drug that contains several activities, differing in quantity and in powers, is a single remedy or unvarying in action. Chemically pure salicylic acid is a single remedy; but the impure commercial varieties that in one instance permit a dose of 960 grains to be taken without serious injury while 15 grains of another sample may put the taker in peril of his life are not single remedies.

The man who gives every constipated patient compound cathartic pills must give place to him who stimulates peristalsis when deficient, mucous secretion when absent, and does not needlessly irritate the small bowel when the large one is alone at fault, or *vice versa*.

The venom of the rattlesnake, under the name of crotalins, was introduced by Professor Mays, of the Philadelphia Polyclinic, as a remedy for tuberculosis and other conditions. Crotalins is proving a remedy of tremendous power, inducing a reaction like that of tuberculin. It is up to us to learn so to manage and apply it as to utilize this power for our patients' benefit, and thus pluck safety from the jaws of death.

Profound interest has been aroused in the sulphide of calcium by an article in *The Medical Record* giving the experience of Dr. Ussher, an American medical missionary in Syria, in the use of this agent in typhus, variola, scarlatina, and other infectious maladies. Dr. Ussher frankly stated his belief that the use of calcium sulphide came to him as the direct answer to his prayer for help in an emergency. This remedy is well known to the users of active principles; but many who looked on its advocacy as a strictly commercial exploitation have been startled out of their indifference by Dr. Ussher's remarkable statements.

Calcium Sulphide Protects from Smallpox

An epidemic of smallpox, 600 unprotected children in the school, and the nearest supply of vaccine 1000 miles horseback travel distant! Saturation with the sulphide proved protective for the period of exposure, as it did for the other infections above named.

Possibly some of those who ignored this priceless remedy on the flimsy excuse that it, a standard pharmacopeial preparation, absolutely free from secrecy or proprietary monopoly of any sort, was advertised by a house whose only claim was the standard quality of a product that scarcely any other drug house furnished of reliable quality may begin to remember uncomfortably the lives they might have saved had they investigated its merits.

The conquest of pyorrhea alveolaris by Prof. Talbot is another notable event. Dr. Talbot studied this malady not only as a dentist but as a physician and traced its causation to those general conditions which are beyond the ken of the mere dentist, hence had baffled the latter's most earnest investigation. Dr. Talbot traced this local malady to autotoxemia and acidemia and so cleared up the mystery. Nor did he neglect to establish the treatment—he is not the sort of scientist that is satisfied with barren deductions.

The employment of the chemically pure active principles is growing rapidly. Every European army is now equipped with these remedies, the advantages being so obvious

as to admit of no argument; and at last the army and navy of our own country have turned their attention to this matter. When an army surgeon can carry in one pocket-case over 30,000 doses, ready to be used and to exert their remedial powers within one minute, the same remedies in the ancient form requiring a mule team to transport, together with the water and other things necessary for their administration, there is reason enough for investigation.

In civil life the use of these agents steadily increases. This has naturally been most evident among the physicians who dispense medicines rather than prescribe, and the reason is not far to seek.

The man who dispenses knows more of drugs and their quality, has more faith in them and knows better how to apply them, than the one who prescribes and never bothers himself as to what the druggist may supply. Not that the latter is untrustworthy, as a rule, or incompetent; but he is only human, and he is in business. One correspondent told of a druggist in New England who made his tincture of echinacea from the plant he gathered there—although it does not grow east of the Mississippi; but we did not hear of any doctor who detected the error. Nor did any of those more than one hundred who were furnished brickdust on their prescription for aristol so much as suspect the substitution! Truly, as an inspector of drugs caustically remarked, "the persons who pronounce drugs useless probably never made use of 'drugs.' "

The movement to restrict physicians by law from dispensing presupposes an ideal condition of qualifications and opportunities, of absolute equality, on the part of the pharmacists, which must precede any such legal enactment to which the conscientious physician can render obedience.

Progress of the Single-Remedy Therapy

The study of single drugs has been taken up by the surgeons, and we note their application of physostigmine, atropine, pilocarpine, hyoscine, strychnine, quinine, and other alkaloids. In the medical periodicals, too, these remedies seem to be mentioned

with ever-increasing frequency. The writers can not now be held up as of "the alkaloidal crowd"—if so, that same "crowd" seems to be getting to be a pretty numerous one of late years.

The difficulties in the way of the general adoption of this method have been, (1) the alleged commercial nature of the movement, (2) the ultrascientific character of the qualifications demanded for its application, and (3) the inveterate habit of the profession that makes it impossible for the old-timer to change his ways.

The first objection falls to the ground through its absurdity (proprietary medicine must be secret or otherwise monopolized), besides being a *non sequitur*, and recognized

as such by the practical physician who asks first and last as to the utility.

The second difficulty vanishes upon trial, and the physician soon realizes the ease of this natural method of prescribing for what he sees to be wrong in the patient, instead of the old, warped, unnatural method that laid on the doctor such a paralyzing burden.

The third difficulty is in the way of solution, as school after school takes up the work of teaching scientific therapeutics, and the students flock to such schools by preference.

The outlook is full of promise. The medical profession as a body is too practical to be deceived. In matters where the doctor is judge and jury at once he will decide for himself, and decide rightly.

The International Anti-Alcoholic Congress

A Medical Review of its Work

By T. D. CROTHERS, M. D., Hartford, Connecticut

BOOTH the lay and medical press of this country seem to be under the misapprehension that this Congress was simply a gathering of enthusiastic reformers whose principal purpose was to show the evil effects of alcohol. In reality it was the twelfth great open parliament or congress of teachers, doctors and reformers for the general discussion of the topic of alcohol and the evils which come from it.

More than a quarter of a century ago these gatherings began in the different cities of Europe, at intervals of two years, and while papers of the most radical character were read and discussed, there were no resolutions passed endorsing any dogmas or theories, or committing the Congress as a whole to any statements or theories. It was simply an open discussion, without dogmatic conclusions set forth as facts, which the Congress supported.

The magnitude of these gatherings and the importance of the papers read assumed a national character in 1907, and the Swedish Government took the Congress under its special control and made it an inter-

national affair, inviting delegates from all over the world to participate. The success of this meeting, and its contributions to both the sociological and medical sides of the subject created a great sensation in Europe.

The Congress Under the Patronage of the British Government

The result was that the British Government invited the next Congress to convene at London and gave it more prominent official recognition. The Home Secretary issued formal invitations to every civilized country to send officially appointed delegates to take part in this Congress. Sixty men appeared from the different governments, nearly all diplomats, teachers, physicians and officers of the respective governments. Almost every temperance and reform society in the world sent delegates, and all the great church organizations were represented.

Then came an army of interested persons who were made members of the Congress. In all, over 1400 were registered, making it the largest gathering for the discussion of

the alcoholic problem ever held. The Duke of Connaught was Honorary President.

The Congress was divided into two sections, the sociological and the scientific. Forty papers were read in these different sections, and discussed. As abstracts of each paper were printed in three languages and distributed freely, it was possible to follow every speaker and to know what he was saying. Both at St. Paul and the Westminster Cathedrals opening sermons were preached, introducing the topics of alcohol and its effects. The first general meeting was presided over by Lord Weardale, one of the Government secretaries, who delivered an address and welcomed the assemblage in the name of the Government. A public reception was given by the Government in the evening.

Work of the Sociological Section

In the sociological section the educational influence of efforts to diminish the evils of alcohol was a subject of many papers, both by physicians and clergymen, but all of a popular character. In another section alcohol and its effects on children and its relations to the home, and the legal protection of children, was the subject of several very strong papers.

The question of the action of alcohol on public service brought out several papers on the legal, naval, military, postal and railway employments. One session was devoted to alcohol and its relation to vital statistics. This was discussed in many technical papers, several of them by presidents of life insurance companies who brought out prominently the fact that the statistics of life-insurance companies showed the diminishing mortality lately from alcohol. At another time papers on the legislative and administrative measures to control the effects of spirits brought out many very interesting facts concerning the efforts of different nations of the world to curtail [the use and abuse of alcohol.

Some very interesting papers were presented on alcoholism and the native races, and the possible remedies that could be applied nationally.

In the scientific section Prof. Henschén of Stockholm discussed the relation of alcohol and tuberculosis, in which he pointed out their very close relationship and showed that the children of alcoholic parents were very susceptible to tuberculosis. He presented some statistics of 1244 cases in which it was very evident that the two diseases were closely associated and that alcohol in no way was a remedy for tuberculosis. This paper brought out a very interesting discussion and confirmation from many eminent authorities.

In another paper Prof. Laitiner of Finland gave the results of experiments made and studies of 20,000 children from about 7000 families. The object was to show whether the effect of the moderate or excessive use of alcohol could be ascertained in the offspring of drinking parents, and his conclusions were that the effects are very marked, and in many families the alcoholism of the parents was fatal to the longevity of the children and always left them more susceptible to disease.

Dr. La Grain of the Insane Asylum on the Seine, in a paper on insanity following alcoholism, described at great length the form of degeneration and disease which was due to the use of alcohol. He declared it was far more fatal than lead and phosphorus poisoning. He declared that each intoxication was an attack of lunacy and followed by results which were not easily overcome.

Alcohol and the Nervous System

Dr. F. B. Mott, pathologist of the London Asylum and physician to Charing Cross Hospital, read a paper on the effects of alcohol on the nervous system, illustrated by slides. He gave great emphasis to the subtle, unrecognizable changes which follow from the continuous use of spirits. He declared that the direct result of alcohol on the nervous tissue was a deranged biochemical one in which poisons produced by microbes are encouraged to combine and conspire with alcohol, deranging digestion, assimilation and excretion, and starting a vicious circle which not only causes lack of control, but develops a great variety of most complex

degenerations that later are structurally recognized. He declared that to the feeble-minded and to weak, susceptible systems alcohol is a poison even in moderate doses.

Dr. Holitscher of Carlsbad presented an elaborate paper on the diminution of the consumption of wine and spirits in hospital and private practice, and showed that with this there was a tremendous increase in the use of milk and seltzer water, and also with it a decrease in the mortality. He gave the figures of 47 large hospitals of Europe.

In a paper on the treatment of criminal inebriates Prof. Aschafenburg of Cologne discussed the following points. Any quantity of alcohol is injurious even if its effects are transitory and every user of spirits is in danger of becoming a criminal. The greater the heredity and the weakness of the nervous system, the more danger. Legal penalties are insufficient and do not act as deterrents. Persons of that class should be confined to hospitals in which various degrees of restraint can be applied. Where the case is chronic, long periods of detention with parole should be used.

Prof. Rivers of Cambridge, England, in an illustrated paper on the influence of alcohol and other drugs on fatigue, described at great length the complex methods of measuring and testing fatigue-symptoms, and the very elaborate experiments which have been going on for a long time. The results so far have not been very pronounced. It was evident, though, that pure alcohol in many persons produced decided fatigue; in others this was not noticeable. The same was apparent in the capacity and incapacity for work. As experiments were purely laboratory work a long time was necessary to bring out any positive conclusions.

Effects Upon the Brain

Dr. Clouston of Edinburg read a very elaborate paper on the resistive power of the human brain against alcohol, and its limitations. He asserted that there was an enormous power of resistance in the normal and sound brain to the effects of alcohol and drugs, but in others, where the brain was impaired and feeble and the nervous system

defective, there was great danger that this resistance could not be overcome and the person would very readily become an alcoholic or dipsomaniac.

He described the destructive effects of alcohol on the higher cells and the possibility of recovery. Alcohol was the most seductive poison because of its narcotic properties, giving a sensation of comfort and covering up the distressed signals, and was also to many persons a most fascinating drug. It was the unfit, and the debilitated either from inheritance or by neglect of normal living that showed peculiar susceptibility to the narcotism of alcoholism. He urged that the whole subject be treated as a medico-hygienic problem.

Alcohol and Immunity

The Norman Kerr Lecture was delivered by Prof. Laitiner of Helsingfors before an immense audience. The subject was the influence of alcohol on immunity. His experiments were based on studies of 223 persons and a large number of animals. What he sought to ascertain was whether the resistance of human red blood-corpuscles against normal serum or immune serum was diminished by the use of spirits, or whether the bactericidal power of blood-serum was the same in alcohol drinkers or abstainers, or whether the blood was in any way altered by alcohol. The results of his experiments showed that the normal hemolytic power of the blood is less in persons who use spirits, and that the bactericidal power of blood-serum against typhoid and other bacteria was less in a case of drinkers than in abstainers. His final conclusion was that alcohol, even in small doses, exercises a prejudicial effect on the protective mechanism of the human body.

A second paper by Dr. Holitscher of Carlsbad was a study of alcohol as a remedy in pneumonia and enteric fever in 47 different hospitals of Europe. His conclusions were that where alcohol was not used, the mortality was less, and that the nonalcoholic treatment of these cases, all other things being the same, gave the largest promise of success.

Dr. Branthwaite, the inspector of inebriate hospitals of England, described the legislation for inebriates and its practical character. He declared the inebriate a potential criminal, a danger to himself, a terror, scandal and nuisance to his family, and that the State must provide means and measures of protection both to the community and to the patient. The work so far has proven to be very successful.

The Lord Chief Justice of England presided at one of the receptions and made a very strong address on the necessity of studying the alcoholic problem, asserting that, in his experience as a judge, 90 percent of all the crimes of all the country were dependent upon alcohol, and if we could diminish the use of alcohol as a beverage, it would cut down the crime of the country.

Colonel McHardy of Edinburgh gave a very startling statistical study of 58,000 cases of crime and drunkenness reported in Scotland during 1907, showing that 84 percent of all arrested were under the influence of spirits when the crime was committed. These statistical tables were startling studies. This paper was followed by a number of others along similar lines, all of which will appear in the volume of transactions, which will soon be published.

Government Representation at the Sessions

The most impressive part of the Congress was the Government recognition and representation at all the sessions. Lords, members of Parliament, leading physicians and prominent officials occupied the platform and took part in the discussions. The Lord Bishop of London gave a reception to the delegates, and numerous dinners and private receptions were given by the universities, the Masonic lodges and diplomats, to special groups of delegates. A number of leading men sat down to breakfast every morning, and while dining together listened to various discussions and speeches on different phases of the subject.

The physicians among the American delegates who took an active part were Drs. Crothers of Hartford, Hughes of St. Louis,

Reid Hunt of Washington, and Surgeon Pleadwell, of the United States Navy.

Numerous excursions about London were given by the Government and others. The daily press reported the proceedings very fully and the Continental papers printed most of the transactions in full.

It was very evident that the subject of alcohol and the various problems and public-health questions which concentrate about its use have assumed a national importance. Apparently no other subject, not even consumption, has so vital an interest to all branches of medicine and reform, and the national recognition of this fact is the beginning of a new epoch in the study of the subject.

It was pleasing to note that the studies of Americans were recognized as the most advanced of any country in the world, and while a formal invitation was given to hold the next congress in America, the Queen of Holland, who sent a special invitation to meet at the Hague in 1911, was accepted.

Miss C. F. Stoddard of Boston, the head of the Scientific Federation Bureau, was given a very leading position on the program because of her association with Mrs. Mary Hunt in securing laws, in every state of the Union, requiring that the dangers of alcohol should be taught as a hygienic topic. This brought out a very strong array of figures and discussions from eminent physicians on the value of teaching the dangers of alcohol in the common schools. This was one of the subjects that attracted unusual attention.

Reports of the Daily Press

The daily press gave a very large space to the proceedings and made frequent comments on some of the very startling facts. The medical press later gave a brief summary of each paper, followed by conservative comments, all recognizing the fact that this was the beginning of a new era in the alcoholic problem which was destined to occupy a very large place in the public's mind.

The dominant idea brought out was that alcohol is a depressant and narcotic, and

should never be considered a stimulant or tonic, and that as a beverage it has no place whatever. Many of the papers brought out a great variety of facts showing the degenerations from the use of alcohol both from laboratory and clinical experience.

The Gift of Wine at Budapest

It is interesting to note in this connection an incident which took place at the International Medical Congress held at Budapest last month. Each member of the Congress received two bottles of Tokay wine with the compliments, apparently, of the Hungarian Minister of Agriculture. In reality it came from the Hungarian Wine Growers' Association and had a certificate from the Minister that the product was pure. Accompanying this present was a very attractive booklet giving great prominence to the value of this wine and calling the doctors' attention to its medicinal power in disease.

A circular letter protesting against this was issued, signed by Sir Victor Horsley of England, as president, and more than fifty leading English and Continental physicians, denying that alcohol had any value and considering it an insult to be advised concerning the value of spirits or wines in any form. This letter urged members not to accept this present, and thus become a party to an iniquitous delusion which every scientific study and clinical experience had flatly contradicted. This created a great stir, and the wine dealers tried to take

advantage of it for advertising purposes by a canvass among the leading physicians to secure their endorsement. To their great astonishment nearly every leading man refused to be interviewed or to commit himself to the endorsement of wine as a medicine. The incident created quite a ripple in some circles, but was unmistakable evidence that the doctor has taken up the alcohol problem and will soon be recognized as a teacher and leader.

Another incident occurred some months ago which is equally significant. The American Society for the Study of Alcohol and Other Narcotics held a meeting in Washington, D. C., at which 21 papers were read. The character of these papers, and the interest which they excited, attracted the attention of Congress and a resolution was passed making these papers a public document and publishing 5000 copies for free distribution. This is called Senate Document No. 48, and copies can be had through the senators and members of Congress by addressing them. There was something very significant in this last incident, that the alcoholic question should be considered of such vital importance beyond any other reform movement of the day, and that the papers should be of so much importance.

The significance of all this is, that the alcoholic problem is rapidly becoming one of the great topics of the age, and that medical men will be forced to take it up and become leaders and teachers where they are only followers now.

The Influence of Burggraeve on Modern Therapeutics

By W. T. THACKERAY, M. D., Chicago, Illinois

SOMEWHAT more than sixty years ago, a great idea came to a teacher in the University of Ghent. This physician had surveyed the field of therapeutics and found it unsatisfactory. There was a multitude of drugs, but only a few remedies. Men knew in a general way some of the leading actions

to be commonly expected of a drug if of good quality and rightly administered, but there was no certainty as to the quality or the quantity of the effects that would follow, because the drugs were themselves uncertain and variable. The best anybody could do was to make a guess at what probably would

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happen, and sometimes the guess came pretty nearly true. From this it inevitably followed that practitioners sought to lessen the uncertainty by combining as many of the drugs that might possibly prove useful and giving them together, and so there were devised phenomenal compositions, such as for instance Warburg's tincture, in which to administer practically an entire pharmacopeial array in one single dose.

At that time a few plant alkaloids had been discovered, but they had scarcely begun to come into practical use, being looked upon as chemical curiosities. Volumes upon volumes had been composed on the properties and effects of the sundry drugs of the *materia medica*, controversy and contradiction without end had been occasioned by the variability of the drugs, and so those who attacked and those who defended alike resented a movement that would render their work obsolete.

The Mystic Element in Man

There is a curious dislike on the part of all men to give up the pleasant realms of the unknown, the mysterious, and the supernatural in which the imagination may give itself free play. The hard facts of science are unattractive and restrain the dreamer unpleasantly. These cold, dead drugs which we know all about, which always do the one thing and nothing more, leave too little opportunity for that individuality that every human being craves. Materialism, fact devoid of the habiliments of fancy can never be popular. One superstitious belief is no sooner shattered than another takes its place. We acknowledge that Jove does not rule Olympus, nor Poseidon the sea or Pluto the depths—but we worship Mithras. And even though we may have our doubts as to the vote of the Senate being competent to really deify *Divus Caligula*, we keep our views to ourselves, for the multitude prefers Belief to Negation. But we are wandering far afield.

Burggraeve saw the immense practical superiority of morphine over opium, of quinine over cinchona, of strychnine over *nux vomica*. He saw that we could admin-

ister the pure alkaloids with confidence because we knew just what they would do; that the students of experimental therapeutics were being driven to their use in order to obtain conclusions uniform enough to have value; and he did not see why after extracting the pure, clean alkaloids for experiment one should dump them back among the useless dirt for clinical use simply because physicians had been accustomed to the crudities and found it awkward to change.

Preservation of the Alkaloids

Investigating further, the great Belgian found that the pure alkaloids, preserved in milk-sugar, kept indefinitely without decomposition; they were easily taken and occasioned little or no disturbance of the stomach; they were quickly dissolved and absorbed, saving precious time in getting to work; and above all, the precision of their known powers inspired the user with such confidence in his own ability that he was emboldened to intervene promptly, powerfully and effectively, even in the early forming stages of maladies, when they were as yet plastic and within the control of remedies.

Professor Burggraeve saw no reason why similar advantages should not be secured from every member of the vegetable *materia medica*, by discarding the useless dirt that encumbered the really valuable element and employing this alone.

To a certain extent this has been realized. In all probability it is due to the impetus originating in Burggraeve's movement that so many alkaloids and other active principles have since been isolated. But in this respect chemicopharmacy has run far ahead of the clinician. Comparatively few of the hundreds of active principles recognized have found their way into general use. Those great storehouses of keen-edged, finely differentiated weapons, opium with its 28 distinct active principles, cinchona with 30, chelidonium with 17, have scarcely been touched.

As it is, we content ourselves with morphine as an anodyne, and only of late years has the superiority of codeine as a vagus-

sedative, narcotine as an antimalarial, and one of its derivatives as a styptic, been utilized. So also we employ quinine, and to some extent (too often unwittingly) cinchonine and cinchonidine. Of the rest we have actually not even a smattering of knowledge. So, also, we are content to utilize strychnine as fulfilling all the uses of its class, totally neglecting brucine, thebaine, codamine, calabarine, gelseminine, curarine, and all the rest; although it seems reasonable to infer that among such a group of related remedies there may be individual differences corresponding to similar variations in the clinical pictures presented by patients.

How the Idea Spread

In the practical application of his principle Burggraeve accomplished much in person; but his labors have led to a remarkable florescence in many lands. Van Renterghem in Belgium, Laura in Italy, Castro in Spain, a whole host of brilliant minds in France, and others in every civilized land, have applied and extended the alkaloidal principle until it is a living vital force, a ferment the effects of which are everywhere manifest.

Many attempts were made to naturalize the method in America, but singularly enough, the conservative sentiment proved more stubborn here than in any country of Continental Europe. It was only after repeated efforts with partial and temporary success, that the exotic at last took root and became established.

Dr. W. C. Abbott proved to possess the happy combination of professional acumen to realize the enormous advantages offered by the method of Burggraeve beside the business ability to establish a supply-house on a sound financial basis. This latter accomplishment has been a truly Herculean task, especially since the growing popularity of the alkaloids began to be felt by the manufacturers of the older forms of medicine.

At present more than 50,000 American physicians are employing the alkaloidal methods to a greater or less extent. I say the "alkaloidal methods" advisedly, for the use of alkaloids as remedies did not begin with Burggraeve, nor do all who now employ

these remedies avail themselves of the inestimable advantages of his methods. But it was Burggraeve who first appreciated the possibilities afforded by the systematic employment of these remedies, and announced these to the profession.

He who looks upon the alkaloids simply as a somewhat better line of drug-remedies has not as yet penetrated the outer circle. In truth, the realization of the change in himself, in his ways of looking on disease and the enormous increase in the efficacy of his means of coping with it, usually comes upon the physician a long time after he has begun to walk this path. It often comes upon him as somewhat of a shock that he has so completely altered the point from which he views his own duties. His patients are much more likely to have noted the change—his increase of self-confidence, the certainty with which he prescribes and with which the expected results follow; the tremendous efficacy of his remedies by which acute maladies frequently are dissipated while yet in the forming stage while chronic ailments present a gradual but steady approximation toward healthy conditions, very different from the ups and downs, the improvement and set-backs characteristic of the older methods.

This is no fancy sketch. It is one, however, that will seem such to those who have not gone the route. It is not too much to assert that he who is fully indoctrinated and practised in the applications of the active principles occupies a different plane from other men and this can be appreciated only by those who follow up the matter to his point.

Burggraeve Rejuvenated Drug-Therapeutics

In conclusion I will say that to Adolph Burggraeve, Emeritus Professor in the University of Ghent, is due the honor of having first established therapeutics on a strictly scientific basis, reduced to order the chaos of the *materia medica*, taught the physician to intervene effectively during the formation period of disease, and rescued drug-therapeutics from the grave toward which the ineffectiveness of its preparations had brought it.

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In strict accord with his work, the movement of Burggraeve has been absolutely free from commercialism, inasmuch as the material with which it works is neither secret, proprietary nor protected by any species of monopolistic control. While supply-houses that furnish these active principles of standard, that is of unvarying quality, are absolutely necessary in view of the variable strength of the alkaloids as found in the market, there is no proprietary control exerted over these agents, nor has any single supply-house any advantage over others beyond what accrues to it from the well-earned confidence of the profession in the uniform quality of its products. We are hardly in a position to say that such a reputation is undesirable or reprehensible; and yet this unsubstantial reproach has been the only objection as yet brought against the Bruggraeve movement.

One word as to the convenience of the dosimetric, or alkaloidal, method in actual practice. Under the old style it was next to impossible for the doctor, and especially the doctor practising in a sparsely settled neighborhood, to carry with him a sufficient supply of medicines for his work unless he could travel in a wheeled conveyance. The saddle-bags and packs were always bulky and inconvenient. However with the method under consideration it is possible to carry an almost complete phairacy without attracting undue attention and also without inconvenience.

To the military surgeon alkalometry should appeal with even greater force—the compactness of the granules as well as their keeping qualities and their effectiveness particularly must recommend them. I am not conversant with the field-case or the detached service-case, as used outside of my own country, but our medicine-case consists of a crate 15x18x36 inches and this contains two boxes, each weighing when filled 50 pounds. This case contains a moderate supply of medicines and dressings designed for a regiment. But I can show you that upon my own person I can carry a larger and more varied supply of drugs than is carried in the army-case referred to, and I doubt if any army surgeon could notice this in my tight-fitting uniform.

There are in my four cases 9600 doses of absolutely effective remedies for active emergency use by the surgeon, so that the field-case may be left to carry a larger supply of the more bulky dressings and instruments. In addition, I can carry with me a hypodermic case containing the new hypodermic anesthetic, hyoscine, morphine and cactin, with which from the supply in hand I can relieve the pain and shock of desperately injured men and place them in condition for operation as opportunity and convenience offers.

I close by voicing the hope that every one of my readers will become an enthusiastic and consistent alkalometrist.

A New Year's Resolution for the Profession

By C. E. MEIXSELL, M. D.

RESOLVED.—That I love my profession and will try to master it; love my enemies and try to overcome them; love all mankind and seek to be loved; love virtue above passion, moderation above excess, health above wealth, and God above all.

RESOLVED.—That I try to be glad of life, because it gives chances to love, work and play; to be satisfied with my possessions but not content with self until I have made the best of them; to despise nothing worldly except falsehood and meanness; to fear nothing except cowardice; to be governed by my admirations rather than by my disgusts; to covet nothing of my neighbor's except his kindness of heart and gentleness of manners; to think seldom of mine enemies, often of my friends, and each day of Christ Jesus.

A Pharmacodynamic Study of Morphine

*Morphine Can Save Life! Its Employment in Organic Diseases
of the Heart*

By ROBERT TISSOT, M. D., Chaux de Fonds, Switzerland

Collaborator on "Folia Haematologica" and on the "Journal de
Dosimetrie et d'Alkaloidotherapie"

II

MORPHINE capable of saving life! This is an affirmation which will meet with much incredulity, and yet, experience, that single source of truth, as Poincaré has written, shows us that this proposition is a true one. As we have seen, morphine is a tonic because it favors the formation of biogenic molecules and calms the too violent reaction of the organism from the irritations which may come to assail it. It acts in these cases like chloroform; it is capable of cutting short uremic convulsions and the paroxysmal edema due to nephritis or renal sclerosis.

The following observation is instructive. A man, age 63 years, suffering from emphysema and a feeble heart, was suddenly attacked with grave pulmonary edema which, considering the severe cardiac weakness, threatened the sudden termination of his life. The patient had conserved all of his mental clearness; the dyspnea tormented him terribly. It was for this reason that he had been given an injection of morphine, as desired by himself and his friends, the latter having previously been informed of the possibility of a fatal termination. The dose given was 1-5 of a grain, and the effect was a most happy one. The dyspnea ceased almost instantly, the expectoration of viscous and frothy masses was arrested, and the patient passed into a peaceful sleep lasting several hours, which comforted him greatly. Some days later he got up, and appeared to have overcome his attacks; six weeks later, however, there occurred a nervous paroxysm which ended in death before the physician arrived.

Observe the situation: If the excellent effect (at least from the symptomatic point of view) of the first dose of morphine had

not been known and the injection had been made during the second attack, the morphine would have been charged with having caused his death! The list of harmful injections would have been augmented by one more case—quite erroneously, it is clear, since the first attack passed away in spite of the injection, or, better, because of it. This observation shows also that it is not proper to attribute the troubles of the patient to his remedies, as the patient and his friends constantly assert, and that it would be infinitely more just to see in the happenings of the case the effect of the disease and its organic reactions.

Rosenbach recommends morphine in the treatment of diseases of the heart, since its effects are in many respects similar to those of digitalis. Properly employed these two agents are tonics, but they are so for different reasons. Digitalis augments the mechanical work of the heart. Morphine, on the other hand, diminishes the activity of the organs, lowers the excitability of the central nervous system, the psychic centers in particular, as also that of all the tissues. Morphine diminishes intraorganic activity; the nerve-centers having become less sensitive no longer respond to the sensations of pain produced by the vital acts rendered difficult by the disease. The dyspnea, the precordial cough, palpitation, and radiating neuralgias disappear at once under the effect of the narcotic. The muscular agitation, the gasping respiration and psychic depression disappear also. Through the influence of morphine the organism is reduced to the minimum of vital functioning; it no longer keeps count of the bad condition in which it is found. During this period of calm it again reassembles the energies capable of reestablishing the vital tone, and this tone permits all the organs to

work together in harmony, which is to say, normally.

Morphine, therefore, is an economizing remedy. In small doses it stimulates the protoplasm. The combination of digitalis and morphine fulfills two indications: it places the body at rest and increases the tonus, gives fresh energy. When digitalis no longer acts, morphine is indicated because of the economy of the vital forces it effects.

In angina pectoris the suffering depresses the spirit and weakens the body because it makes too large a requisition upon the muscular force that must overcome the dyspnea. In this condition the organism loses its strength while acquiring no fresh strength because of the lack of sleep. In these cases morphine clearly is indicated, but it is necessary to employ it in small and prudent doses (1-13 to 1-6 grain). This mode of treatment is far superior to injections of camphorated oil or ether, which not only are painful but the effects, of which, according to Rosenbach, are uncertain.

Morphine is indicated at the beginning of failing compensation of the heart, especially in excitable patients, since this alkaloid is capable of relieving for some days, and even for weeks, the so-called cardiopathies. Morphine is also indicated when there is palpitation, the sensation of constriction, the result of bodily effort and psychic emotions. It is proper to give it also to patients who cannot sleep because of precordial pain, palpitation, pulsation in the vessels of the head and noises in the blood-vessels. In these cases small doses of morphine given occasionally have a very good effect. This effect is more lasting than that of bromine or other nervines; but in these cases, in order to avoid habit formation, it is necessary to give the remedy only at very long intervals (three to five days),

to restrict it exactly to the needs of the patient, and to proceed according to the progress of the disease and the symptoms which it presents.

In nervous cardiac patients the effects of small or medium doses of morphine (1-13 to 1-6 grain) are often marvelous and aid greatly in the psychotherapeutic treatment. The same is true in patients suffering from general nervousness and in cases of neurasthenia when not too severe. This advice

may appear singular because these nervous individuals contribute the principal contingent to the victims of morphinomania.

However, this fact should not frighten us, since the danger may be cut short very easily: *All that is necessary is that the physician himself give to the patient the proper dose, and this dose only.* In this way the control of the patient will always be absolutely in his hands. The dosimetric granules lend themselves admirably to

this method of dispensing by the physician. Subcutaneous injections should not be made except as a last resort when the insomnia has lasted too long. For example:

Let us notice here that it is necessary to distinguish three categories of nervous individuals:

1. Those whom their faculties render incapable of doing the work which is imposed upon them; also the discontented—those who are placed in conditions not suitable to them.

2. Individuals of weak will-power, who are easily curable provided they are unceasingly spurred on and recalled to their duties.

3. The fatigued, whom physical or moral influences have made the victims of the conditions of family or social life. These patients only need rest and change of environment. Under such a condition and under



DR. ROBERT TISSOT

this condition alone they become capable of continuing their occupations and retaining their position in society.

Of course, all the gradations among these three forms are encountered. In the three cases enumerated, however, the treatment is indicated by the etiology and is either psychic or somatic. Still, it is suited only to adults and should constitute merely an adjuvant to other therapeutic means.

Morphine Useful in Excited States

In these cases of abnormal excitation morphine given in doses of $1\text{-}13$ to $1\text{-}6$ grain has an extraordinary action on subjective palpitation of the heart, on the sensation of agony, vertigo, on the insomnia and psychic depression. Its action is decidedly superior to that of the bromides. Morphine, while causing these symptoms to disappear simultaneously with the hyperesthesia and hypochondria, leaves the patient in a state of euphoria which greatly aids in the cure.

This sense of euphoria makes one believe a complete cure has been effected. However, one should not be deceived in this, lest the patient should fall into the morphine-habit. Let us see. Believing himself cured and returning to his occupation, the unfortunate victim will experience anew all his former troubles—the pains, the cardiac palpitations, the disagreeable sensations in the muscles and skin, and so on. It becomes necessary again to give him doses of morphine to restore the euphoria. This, eventually, may result in a vicious circle, since the morphine ought not to be, in this treatment, a calmative but rather a tonic, aiding the other tonics, which are rest and psychic treatment. The need of renewing the dosage of morphine is hardly felt when the patient keeps in bed. This we should always bear in mind.

In true neurasthenia the subcutaneous injections made at judicious intervals give excellent results, provided the physician is firm and does not allow himself to be moved by the patient. Neurasthenic patients experience a great number of disagreeable sensations accompanying all their actions. Morphine removes a number of these, but the patient should be taught to bear these

evils, at the same time showing him that this is for his own good.

[It may here be mentioned that there is found to exist some analogy with the action of digitalis in cardiac patients. When the latter remedy has overcome the troubles of compensation the patient considers himself cured and demands more of his heart than it can give. That is why it is necessary to make these patients understand that the equilibrium, when established, may very easily be destroyed on their part and that they ought to do everything possible to prevent this. For that reason they should avoid excesses of every kind so that the heart may have to do but a minimum of work. To summarize, these patients ought to be treated like perpetual convalescents.]

Morphinism has spread greatly in recent times. This, however, is no reason for giving up the morphine. It is far better to know the causes of the abuse in order that we may avoid them. These causes have already been described.

After great physical exertion the patient experiences muscular pains, chills, loss of appetite, and insomnia. In these cases $1\text{-}13$ to $1\text{-}6$ grain of morphine gives rest to the fatigued and irritated body. As experiences often show, persons with an irritated stomach often prefer to go without eating rather than to suffer after meals. At the same time, those who go to the table fatigued and hungry often suffer, during digestion, from burning, regurgitation, flatulence and colic. In these cases small doses of morphine, $1\text{-}13$ of a grain, will cause the disappearance of these phenomena and check too violent reaction on the part of the stomach. Some patients go to sleep easily but awake at the end of one or two hours of sleep. In these cases it is necessary to employ only a small dose of morphine, $1\text{-}13$ of a grain, and to give another dose at the end of the two hours so that the patient may have six to eight hours of the necessary sleep.

Morphine in Febrile Diseases

Why is not morphine given at the present time, in suitable doses, in febrile cases when everything absolutely indicates it? Its ex-

clusion seems, at first sight, to be incomprehensible. It is due to the fact that the older practice considered fever and all of its forms as being of asthenic origin. This conception necessarily led to the combatting of fever with stimulants, alcohol especially, and the albumins. In these later days this method of looking at fever has lost ground. However, morphine is not always employed in febrile conditions because it is understood that the heart is always menaced in these conditions and because it is also understood that morphine paralyzes the heart.

Morphine in Typhoid Fever

The harmfulness of morphine in typhoid fever is an intangible medical dogma. It was on this point that Rossbach determined, although with trepidation, to give morphine to an agitated patient whom delirium and jactitation had brought to the end of his strength and who had not slept for several days. The result was strikingly happy. The heart was not weakened but, on the contrary, the reparative sleep gave to it new strength as well as to the entire organism. Delirium and the agitation had cost the patient an enormous amount of wasted energy.

To arrest such sources of loss is plainly excellent therapy. The nervous system exercises a very great influence on the production of heat and on its regulation. It is also marvelous to see the tonic action of morphine upon patients in the midst of a chill or an attack of dyspnea and febrile pain. To these morphine gives new strength, so that one can comprehend readily, after seeing it, the classic exclamation of that great clinician: "*Me Hercule, opium non sedat.*"

Summarizing, morphine is indicated in febrile conditions with irritability of the muscular and nervous systems. It should be employed also in cases in which cerebral irritation causes hyperpyrexia. It is also indicated when they are nervous. It is known that in these patients the fever is lit up more easily than among those of a phlegmatic character. The problem for the therapist is to determine whether the nervousness is the cause of the hyperpyrexia or if the latter is the cause of the accompanying nervous-

ness. For this reason it is necessary to look after the antecedents of the patient.

Morphine acts quite differently from the usual antipyretics, the latter fixing the excess of body-heat while the morphine acts directly upon the heat-regulating centers, which it calms efficaciously. It will be logical to associate morphine with the antipyretics in order to fulfil two indications. It acts synergistically for the good of the patient. The excess of the febrile reaction brings about weakness, and this weakness interferes with the salutary reactions of the organism. In regard to the morbid causes, such are the acceleration of the combustion of toxins by the acceleration of circulating blood, the hematosis, the leukocytosis, the urinary purification, the disintoxication of the entire organism by the liver, the thyroid and the hypophysis.

There is an analogy between this severe febrile reaction and the cough and nervous vomiting. These conditions, which may have an entirely local cause, sometimes persist for a long time, entirely without reason, even after the first cause has long since disappeared. It is absolutely rational then to control them with morphine. By reestablishing a condition of calm, the patient is relieved from useless suffering and unnecessary expenditure of energy. We should also bear in mind in delicate problems like these that medicine should be given *summa cum prudentia*, that is to say, dosimetrically. Let us now examine the treatment of the morphine-habit.

Morphinomania

Morphinomania, or morphinism, is shown by physical, or somatic, symptoms. These are myosis, vascular contraction, muscular weakness and trembling, diminished sexual potency, amenorrhea, and atrophy and dystrophy of the nails, the teeth and the hirsute system. On the part of the brain one notes suffering physically, hallucinations, somnolence, intelligence and memory diminished. The moral sentiments become less acute. The patient commits robberies, is guilty of misdeeds, or he experiences psychic degeneracy. This condition renders worth-

less even the most beautifully intelligent mind. This is why it is necessary to remove the poison from the morphinomaniac as quickly as possible, before it can cause serious trouble. But how should it be taken away from him?

The Withdrawal Symptoms

To reply to this question it is necessary to pass in review these symptoms: These are yawning, repeated sneezing, watering of the eyes and an increase of the nasal and bronchial secretions. The voice becomes raucous. The pupils become dilated, while the pulse shows that the vascular tone is lowered. The extremities become cold, the head, on the contrary, being hot. At short intervals an opposite condition is produced, namely, the skin becomes damp, paresthesias are observed all over the body, besides cephalgia, hemicrania, neuralgia and pain in the calves and the knees. Ocular accommodation is greatly impaired. The digestive troubles are multiplied, there being eructations, vomiting, loss of appetite, borborygmus, gastralgia, and pains in the lower abdomen and the rectum. Spasm of the urinary bladder and the gall-bladder are not uncommon. Amenorrhea gives place to painful dysmenorrhea with painful hemorrhages. The sexual impulse is aroused and becomes intense. In a man this excitation is marked by strong erections and pollutions. Generalized or local trembling, gastralgia, staggering gait, asthma, the re-appearance of the neuralgias, denutrition, sometimes causing collapse and cardiac paralysis—this is the list. None of these symptoms appear except when abstinence is too abrupt. When the reduction of the doses is poorly graduated, collapse is shown by paleness, weakness, easy compressibility of the pulse, and pallor of the face.

Symptoms pointing to the encephalon, are agitation and excitement. The patient never is at rest, sitting or lying down. He runs here and there, sighs and always demands something else. The patient thinks he has insomnia and frantically demands his favorite poison. These people are very capricious, discontented and disagreeable. The women often shows signs of hysterical stigmata and

the men present something like it. They are given to strange exaggerations, they experience convulsive or spasmodic attacks of hyperesthesia, hyperalgia, muscular contractions, transitory delirium; visual hallucinations are not uncommon. There also is observed the mania of delirium, quite comparable to the delirium tremens of alcoholism. This delirium is accompanied by trembling, difficult speech, diplopia, hallucinations of all the senses, agony, furious mania necessitating the isolation of the patient. This delirium may be accompanied by albuminuria, and by debilitating the heart the life of the patient may be placed in danger.

Therapy of Demorphinization

The therapy of the demorphinization cure suggests itself by a consideration all the facts involved. It should first be recalled that this cure should not be undertaken if the patient is troubled with a feeble heart or is affected by some acute or febrile disease. In the latter cases, particularly pleurisy and pneumonia, we should give to the patient the ordinary dose of morphine. If in the course of treatment of the morphine-habit the patient is seized by one of these diseases it is necessary to turn backward and give the primary doses, or even larger doses than these when the heart becomes weak.

Another point on which it is necessary to keep count is this: The incurables, those disturbed by pain and insomnia, the asthmatics, those suffering greatly from headache, those affected with cholelithiasis, the alcoholics who suffer from tremors, mania or delirium, those nervous from nicotine poisoning, the cocaine-maniacs, very old victims of the morphine-habit, all these should not be deprived of morphine.

In all the other cases the patient should be placed in an asylum, since it is well nigh impossible to cure the morphine-habitué while with his friends and at his occupation. This it is not necessary to discuss.

There are several methods of demorphinizing the patient:

- i. Gradual withdrawal of morphine. This is the oldest method. The primary

dose is gradually lessened. The diminution of this dose is regulated by the symptoms or the accidents of abstinence.

2. The abrupt method. From the first the patient is given no morphine whatever. He is abruptly deprived of this poison. This method is followed by the appearance of the violent phenomena of abstinence. It is no longer generally employed.

The Rapid Method Best

3. Rapid demorphinizing. This cure lasts from five to ten days, according to the daily dose to which the patient was accustomed. Demorphinization is effected in about four days for doses of 3 to 5 grains, and in about ten days for doses two or three times as large. This method of treatment is never followed by collapse or grave disturbances of circulation. On the other hand, the other phenomena of abstinence may become very acute, but are only transitory. It is a matter of testing to determine at what rate the daily dose may be reduced. For this reason it is very necessary to discover the dose necessary for the patient, to avoid collapse; but this is not so easy because the patient often deliberately deceives the physician in order to render his abstaining less painful; hence he is likely to name a much larger habitual dose than he has been accustomed to.

The daily dose should be given in four parts, the last one at the moment of retiring, in order to produce sleep, if possible. The other doses should be given before the meals, which should be generous. Alcohol in any form is absolutely forbidden. Exceptions may be made only in apathetic patients. These usually are women who remain in bed without eating, drinking or sleeping. These patients have not, ordinarily, been accustomed to drinking alcohol or other fermented drinks. In patients of this class small quantities of good wine incite appetite, regulate digestion, and bring back sleep. Nutrition is improved and strength returns.

Here, then, as in all therapy, it is not wise to be too exclusive nor to "schematize," but better to individualize. Every cure is based on the state of the patient, whom one

should consider in cold blood, weighing not only every symptom but the entire symptom-complex, that is, the general condition.

The physician should awaken to the necessity of exercising over the morphine victim a great moral authority. He should speak to him with mildness and patience, but without weakness. In the later stages of the cure suggestion may act so well that an injection of a physiologic salt solution may act precisely as a good dose of morphine.

4. The method of substitution. This consists in gradually replacing the morphine by codeine, cocaine or chloral. To replace one bad thing by another bad thing is too dangerous for us to spend time on.

The Use of Alkalies

5. The chemical method. In whatever manner introduced, morphine always is eliminated a large part by the intestinal mucosa, and from this arise the gastric phenomena that are so often observed in the course of the treatment of the morphine-habit when not conducted on dosimetric lines. The presence of morphine on the gastric mucosa during digestion interferes with the normal secretion by this organ. Morphine-habitués are dyspeptics precisely because of this fact. When we demorphinize them, the mucosa, freed from its poison, begins to secrete freely. It resumes energetically its interrupted activity. The an acidity is replaced by hyperacidity, and this hyperacidity is partly the cause of the disturbing phenomena that are observed in the course of demorphinization. At least this is a theory proposed by Hitzig, in 1892. This theory contains much truth, as shown by the fact that when sodium bicarbonate is administered in sufficient quantity the patient bears his abstinence from morphine much better. The daily dose of sodium bicarbonate should be from 100 to 200 grains. The dietetic regimen should be that of hyperchlohydria. This method should always be combined with that of rapid demorphinization.

6. Hypnotic suggestion. This method of substitution through the action of the will of another on the will of the patient has been

successful in isolated instances in patients who were very suggestible, but, frankly, it should not be considered.

Let us now examine the symptomatic treatment of the various phenomena of abstinence.

Yawning and the coryza do not require special treatment. The feeling of cold and chills should be overcome by the heat of the bed thoroughly warmed. Gastric troubles should be relieved by sodium bicarbonate, as we have already seen. The diet for hyperchlorhydria and forbidding of sweets is in order. In severe cases one should give hyosciamine in combination with strychnine in order to control the glandular secretions. Gastric pains will be greatly relieved by hot applications over the epigastrium (linseed poultices). Diarrhea, when not too profuse, should not be interfered with inasmuch as it carries out of the body part of the poison we are fighting. Vomiting may be controlled with iced champagne.

Nervousness may be relieved by prolonged hot baths, the same as in insomnia. Cardiac weakness is efficaciously met with subcutaneous injections of camphorated oil, caffeine, and especially digitalin. Neuralgia may be treated with quinine and the application of the tincture of iodine. Attacks of hepatic colic require a return to the morphine injections. Antipyrin is of value in menstrual colic. Profuse hemorrhages call for ergot and stypticin. Delirium can only be controlled by morphine injections. Collapse can be met with injections of camphor, ether, caffeine, strychnine, champagne; also by mustard over the precordial region.

After effecting a cure, we must not forget that the former morphine-slaves are subject to relapse. Ordinarily these individuals have feeble will-power, and so it is necessary to watch them and keep them thoroughly employed. Alcohol and tobacco, which tend to debilitate the individual, should be forbidden.

Cicutine, The Alkaloid of Conium

A Brief Review of the Physiologic Action and Therapeutic Possibilities of a Very Useful Remedy

By H. H. REDFIELD, M. D., Chicago, Illinois

Professor of Therapeutics in the Illinois Medical College

CICUTINE, or as it is sometimes called, coniine, is a liquid volatile alkaloid derived from conium maculatum. This plant also contains methyl-coniine, conhydrine, and conic acid.

The principal action of cicutine is as a paralyzer of the motor nerves. Its action is at first manifested on the end-organs, from whence it extends upward, eventually involving the nerve-trunks, and lastly the centers themselves.

Methyl-coniine has the same action as cicutine, as regards the paralyzing effect upon the motor nerves, but its action differs from that of cicutine in the respect that, while the action of cicutine begins at the periphery, that of methyl-coniine is initiated at the centers, thence to the nerve-trunks, and finally to the end-organs. Thus by affecting the

centers in the cord first, methyl-coniine causes a paralysis of reflex action. Regarding conium maculatum Potter says: "As the actions of coniine and methyl-coniine vary considerably, and as the relative quantity of each alkaloid in the plant also varies, the results obtained from samples of conium differ in a marked degree, and are often contradictory to each other."

The use of the alkaloid cicutine, however, precludes any possibility of this contradictory action, so liable to occur when the tincture or the fluid extract is used.

In toxic doses cicutine produces numbness, weakness, especially of the legs and feet, diplopia, dilated pupils, labored breathing, dizziness, impairment of speech, and finally death, due to paralysis of the muscles of respiration. The heart is not affected

until carbon-dioxide narcosis occurs, and the mind remains clear, but is torpid. On account of its greater solubility the hydrobromide is the form usually employed.

Indications

Diseases of old men and old maids, in persons of light hair, who become excited very easily; those of rigid fibers.

Cicutine should be studied in indurations of the glandular structures of the body, when the glands involved are of stony hardness, especially when a history of traumatism is obtainable.

Congestions, engorgements, or tumors of the female breast, which may appear only during the menstrual period, are some of the conditions calling for cicutine.

The effects of overindulgence in sexual intercourse, as well as of the other extreme—celibacy, when the patient is shy, timid, retiring, blushes easily, is confused, mind depressed, shuns the company of his fellows, and has a special aversion for the society of the opposite sex, yet dreads being left alone—are fully met by cicutine.

Its depressing action on the motor system, makes it an ideal remedy in cases of chorea.

It should be remembered in whooping-cough as well as in other spasmodyc affections, when its antispasmodic action is needed.

To quiet the motor excitement and prevent exhaustion, in acute mania, cicutine is a most effective remedy.

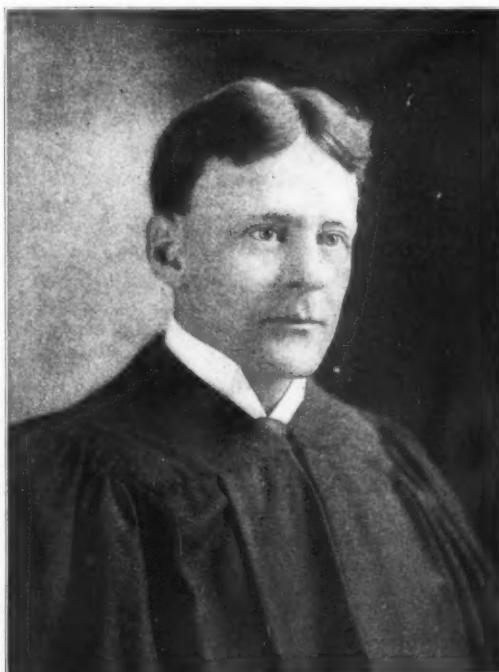
In tracheobronchial catarrh, with a spasmodic cough, which is produced by a sensation of itching or a dry spot in the throat or chest, the cough made worse by the recumbent position, and is therefore especially troublesome at night when the patient is in bed, cicutine will quiet the spasm of coughing and allow the patient to secure the much-needed sleep, which is far preferable to giving a narcotic, which, while it secures sleep, does not materially affect the cause of the

trouble, the next night finding the sufferer no better off than before.

Its action as a sedative in tetanus is prompt and satisfactory.

Cicutine gives most excellent results in blepharospasm.

Landry's paralysis has been benefited by this remedy, and it is especially indicated



DR. H. H. REDFIELD

in paresis, and paralysis which begins at the extremities and extends upward.

It can be given in epilepsy, hysteria, and other convulsive or explosive disorders, without the slightest fear of producing a drug-habit.

It is the remedy of choice in vertigo when the patient is unable to turn the head sideways.

Tannic acid is the best antidote. Nux vomica or its alkaloids, strychnine and brucine, or any other tetanizers are antagonists.

Children as a rule bear cicutine better than do adults.

Rational Therapeutics

Some of the Things that Help Thereto

By F. A. WALTERS, M. D., Stevens Point, Wisconsin

Former President of the Wisconsin State Homeopathic Medical Society

EVER since medicine emerged from the mysticism of the dark ages there are records of certain physicians who were "geniuses"—genius being nothing more than a capacity or aptitude for hard work—who enthusiastically experimented and advanced along certain lines. From an enthusiast it is only a step to what is popularly termed a "crank," but as it takes the latter to make the world move, unless these men have been such, medicine would not have progressed as it has. One of the troubles with an enthusiast or crank is, he is apt to be so absorbed in his own particular line they can see but little good in others. Contemporaneous with these men were others who could see nothing good but in what their forefathers had used and were ready to belittle the work of those who advanced new ideas. Happily there were others who, though not geniuses, were progressive, and testing all things held fast to that which was good and did fully as much for advancement as the geniuses.

Of course all this applies no more to medicine than to all these lines. That many of the ideas advanced by these early workers were wrong is now well known, but had they had the advantages of later-day knowledge, it is safe to say they would have been the first to discover these mistakes and, so, all honor to each in their day and special line.

The Germ-Theory and Its Contribution to Therapy

One of the greatest boons to mankind was the "germ-theory," evolved and proven, which led to the "serum-therapy" both for preventive and curative measures. Then, from the fact that autointoxication from the alimentary tract was as patent as infection of the puerperal uterus or open wound, came the motto of "clean out, clean up and keep clean," and preventive medicine was re-

duced to a science. Then, with "alkaloidal therapeutics" added to this, medicine, as a whole, was reduced to pretty near an exact science. Thus all honor to the alkaloidal geniuses.

Called to a patient suffering from a lethal dose of mineral, vegetable or ptomaine poison, immediate relief is given by emesis or stomach-pump, and proper antidotes to counteract any portion absorbed.

"Clean Out, Clean Up"

A patient suffering from acute autointoxication has practically the same condition as the above, only that the toxins were elaborated by germs, the major portion of which were developed in the alimentary tract, and the whole of the latter must be emptied and rendered aseptic, or as nearly so as possible. In some instances it is best to begin with emesis, rectal enemas, or both, and then give remedies to clean out the many feet of alimentary tract that cannot be reached by these means. Of remedies there are none that equal the much-abused calomel of the ancients, in small and oft-repeated doses, to unlock all the glandular secretions, which thrown into the alimentary tract are best flushed by small and oft-repeated doses of magnesium sulphate or castor oil to effect. Both these good old remedies are to be had in palatable form. If the bowels are loose, as happens in some cases, then, of course, smaller doses are required.

Antiseptics—A Mistake Often Made

Where a mistake is often made, is in introducing the antiseptics into an overloaded and clogged alimentary tract. It would be just as reasonable to try to disinfect a clogged sewer by putting in germicides at the upper and lower ends as to render the human system aseptic with the alimentary canal practically paralyzed and overloaded

with filth. With the latter unloaded and the circulation partially, if not wholly restored, germ-killers will not cause nausea and distress and will have an opportunity to get to where the germs are. At the same time defervescents and hydrotherapy will equalize the circulation and help throw off or out the toxins; then heart tonics, reconstructives and predigested foods will ably assist the white blood-cells in their warfare on the germs left in the system.

Called early enough, this method will abort fevers and assisted by expectorants will jugulate pneumonia. If called later, the same treatment with additional remedies to relieve present and prevent further shock, will materially lessen the severity and duration of the disease. At this time keen judgment must be used, bearing in mind that the action of a remedy is always the same, but that the effect, especially of a sedative remedy, depends somewhat on the temperament of the patient.

For the Relief of Shock

To relieve and prevent shock, the greatest remedy is the much-abused but grand old alkaloid, morphine, combined with atropine or the more up-to-date combination, morphine, hyoscine and cactin or strychnine. These will sedate and calm the nerves of the dark-complexioned, bilious temperaments, but though calming the pain it may increase the nervous phenomena. In the latter case it is best to use the lighter alkaloids of opium and the nerve sedatives.

Called at a late stage, possibly, the patient is found pale, weak, covered with cold, clammy perspiration, showing that the circulatory organs are below par. The urine is found loaded with albumin and blood, bowels tender and tympanitic, bronchi involved; in fact, the system is loaded with germs and their toxins and the nervous system is shattered by repeated and continued shock. The human system is tenacious of life and similar cases have recovered under "expectant" treatment, but this method can be discounted.

Atropine will let glonoin bring the blood to the surface and heart tonics will keep it

there; sedatives will relieve the nervous condition and prevent further shock, while the alimentary tract is carefully unloaded and disinfected, and later toxins and effusions are still further unloaded by diuretics. At this stage ulceration may cause hemorrhage, so now, in addition to the above, ergotin for immediate and hydrastine for future effect must be administered. The same holds good for any hemorrhage but is not needed where mechanical assistance can be given, and if the stomach is intolerant, hypodermics may best be used. Hot applications or cutaneous irritants assist materially to bring to the surface, and hold there the circulation and to relieve inflammation and pain.

In conditions the extreme opposite of the above—the result of scarlet-fever, pregnancy, when the circulatory organs are at high tension, excretions all deficient, the patient perhaps in convulsions—then remedies to relieve and prevent further shock, together with pilocarpine to unlock all the excretory glands, especially of the skin, and after that treatment along the lines outlined above will give most satisfactory results.

Proper diet and habits will cause proper elimination, but when this has not taken place in pregnancy, immediate cleansing and elimination followed by proper diet, especially buttermilk and fruit juices (the best of which are lemon and pineapple) will do the work, and, as already stated, magnesium sulphate is the best cleanser extant and can be had in palatable form; but even in its crude state this salt is not unpleasant when given in small and oft-repeated doses.

Arsenic and gold bromide, pushed to saturation, will stimulate the cells as nothing else will, relieving the system of effete material and curing diabetes up to a certain stage, while mercury, gold and iodine will do the same for syphilis.

Home Treatment of Tuberculosis

Patients afflicted with tuberculosis can be treated along the foregoing lines at home just as well as elsewhere—and all chronic troubles require such a course—but often the added help of pepsin, pancreatin and bile

which will tone up and disinfect the digestive tract to the end that tonics and blood-makers will not long be needed as the system will soon digest and assimilate to the point that it will furnish all that is needed.

The writer still finds that some of his patients deflect to the "faith," "magnetic,"

and other healers, yet others passing to the "Great Beyond" while under his care, but he does not lose nearly as much sleep as formerly and has come to be an optimist in the practice of medicine since gaining a knowledge, superficial though it may be, of what seems to him to be truly Rational Therapeutics.

The Race Problem in America in its Relation to Criminal Sociology*

By G. FRANK LYDSTON, M. D., Chicago, Illinois

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EDITORIAL NOTE.—Recent statements made by Dr. Lydston concerning the negro race and the problems which are centered in it have been made the subject of perverted and inaccurate quotation by the newspaper and medical press. One journal heads a column with the line, "Lydston Would Have Whites and Negroes Marry," and it is represented that he favors miscegenation of whites and blacks. This Dr. Lydston brands as absolutely false. The truth is exactly the opposite, as any person familiar with his published writings can testify. Instead of favoring the mixing of races he has pointed out the danger which it entails and the imperative necessity of recognizing the existence of this problem and seeking a solution. This is the problem which he discusses here.

GLOSS the facts over as we will, evade the involved issues as hypocritically and as skilfully as we may, the race problem is a steadily growing cloud on the horizon of our American social system. It will, of course, be understood that by the race problem I imply the problem of the adjustment of the relations and interests of the whites and blacks in America. All other problems of race, when reduced to their sociologic ultimate, resolve themselves into questions of economics and religion.

The race problem did not begin with the landing of the first slave upon American soil, it did not begin with the freeing of the slaves, it began with the ill-advised attempt to place the recently freed negroes upon a civic and political equality with the white owners of American soil, with total disregard of the sentiments and environments of millions of the latter.

It should be approached with as little sentiment and prejudice as a diseased liver on the postmortem table. It is a cancer on

the fair face of America. That the negro has been a prime factor in the criminality of America since the Civil War is admitted by every observing citizen of this country; that the race problem has a distinctly local bearing, because of the large number of negroes in the South, is self-evident; that it will be one of the determining factors in the evolution of the distinctive American, and especially of the American criminal type, of the future, is almost inevitable. The statistics of amalgamation and of negro criminality alone are sufficient to indicate the formidable proportions of the race problem. Edelmann says:¹

"There are in this country 866 criminals to every million of white inhabitants. The percentage of negro arrests in the southern cities is about 60. In Washington, D. C., with a population of 277,782 in 1901, 26,362 arrests were made; of these 12,582 were from the white population of 189,457, and 13,780 from the colored population of 88,325. Montgomery, Alabama, with a popu-

*Read before the Chicago Academy of Medicine, November 26, 1909.

(¹) "The Negro as a Criminal," *The Medical News*, January 31, 1903.

lation of 30,346, made 2,687 arrests in 1901, of which 1,793 were from a colored population of 12,000, and 894 from a white population of 18,000. Birmingham, Alabama, with a population of 38,415, made, in 1901, 10,630 arrests, of which 4,030 were white and 6,600 colored. The city of Louisville has a population of 205,000, of whom 57,000 are negroes. In 1901 there were 7,958 arrests, and of this number 4,313 were negroes. In Nashville, with a population of about 63,000 whites and 37,000 negroes, there were, in 1901, 9,837 arrests, of which 6,081 were negroes. In Atlanta, with a population of 65,000 whites and 38,000 negroes, there were 17,286 arrests:—5,784 whites and 11,502 negroes. In Jacksonville, Florida, with a population of 28,429, there were, in 1899, 2,895 arrests, of which 976 were whites and 1,919 negroes."

Professor Starr, of the University of Chicago, claims that in the State of Pennsylvania, where there is little opportunity to assert that the courts are prejudiced against the colored criminal, the negro furnishes 16 percent of the male and 35 percent of the female prisoners, although he forms only 2 percent of the population. In Chicago, which is said to be the "negro heaven," he furnishes 10 percent of the arrests, although he forms only 1.33 percent of the population.

Asserted Causes of Negro Criminality

DuBois,² while admitting the large proportion of criminality among the negro population of the South, ascribes their relative moral deficiencies to the following factors:

1. Economic conditions which in certain localities make the negro's freedom a mockery, and what practically is peonage.
2. Rebellion of the negroes against restricted rights and privileges, and unjust discrimination against them in the courts.
3. The malign influence of avaricious whites, the sons of "poor whites," and of "unscrupulous Jews and Yankees," who have found the negro a ready victim to their

⁽²⁾"The Souls of Black Folk," W. E. DuBois. It is evident that Prof. Du Bois' explanations fail in the case of northern statistics.

desire for wealth at the expense of negro labor.

4. The "crop-lien" system, to which the ignorant negro falls a ready victim.

5. A police system that at its inception was designed to control slaves, and which, since the war, has discriminated against the negroes as a class.

6. The training of young negro boys to crime by putting them in chain-gangs with adult offenders.

7. An inadequate public-school system for negroes.

Most of the responsibility for the degeneracy and crime of the southern negro lies at the door of the National Government. The latter has handled the blacks just about as intelligently and honestly as it has the Indian. If the dominant political parties had paid more attention to the industrial, moral, and physical training of the negroes, who were suddenly thrown upon their own resources and responsibility after the war, and less to the cultivation and harvesting of their votes, it would have been far better for the South.

The Burden Imposed Upon the South

Few, indeed, of the people of the North fully appreciate the terrible burden imposed upon the South by the liberation of the slaves. Slavery was a fearful wrong, but it was a national wrong, and it was a crime to throw the burden of an evil that was originally legalized, fostered, encouraged and taken advantage of by practically the entire country upon the section to which it was finally confined. The negro was practically turned loose to seek his own salvation, and, aside from the self-interest of carpet-bag politicians and the warm interest of the republican party in his vote, little was done by the Government to ameliorate his condition or improve his intellectual and physical status. The history of the Freedman's Bureau is a history of a crime. The burden imposed upon the South was greater on account of the impoverishment and demoralization of the whites by the war, and was added to by the new race problem.

Whether the South would have adjusted its relations to the blacks more harmoniously and satisfactorily had it not been for the handicap of negro suffrage is an open question; but this much is certain, race prejudice, as distinguished from individual prejudice, was born on the day the first ignorant negro vote was cast.

What has been done since the war that has been of any practical value to the negro and to southern society has chiefly been due to individual philanthropy, on the one hand, and to the efforts of the South to improve the condition of the blacks in its own defense, on the other. The Government should bow its head in shame before the heroic Yankee school-ma'am and the more intelligent and philanthropic of the Southerners.

The Negro Race a Primitive One

A very important point for consideration in the study of the relation of the race problem to crime is the fact that the negro, like all other primitive peoples, is the product of a relatively simple and somewhat communistic social system, which of necessity imparts to him very crude ideas of property rights. Psychologically he is at bottom on a par with the children of higher races, and he is about as responsible as a child.

The natural shiftlessness of the negro, when left to himself, is simply a reversion to the primitive type illustrated by the native African, who is content with a breech-clout, a plentiful supply of grease for his glossy hide, and multitudinous wives to minister to his various appetites. There is but a short span between the primitive African and his American descendants. How much of inhibitory faculties should be expected to develop within so short a time in a race primarily so barbarous? Is the negro really as antisocial as we ought to expect him to be?

The dire immediate results of throwing a primitive race, previously held in bondage, abruptly into a civilized social system is shown by contrasting the record of the southern with that of the New York negroes. In New York blacks, owning a certain amount of property, had been allowed to vote for

at least forty years prior to the war. They had gradually evolved into a phase of theoretic equality of citizenship that led them to estimate their social status by the highest standard possible to their race. Such a condition of things necessarily imposed inhibitions upon them. The negro, under these circumstances, could not consider himself the victim of oppressive laws formulated by the whites, since his own race, for several decades, had participated in law-making. Law, therefore, among such negroes was to be respected rather than ignored.

The reverse, however, was true in the South, where the blacks were numerous, and passed with one bound from serfdom, in which there was no stimulus of independent thought, to theoretic equality and often to an assumption of superiority. The old adage, "If you put a beggar a-horseback he rides to the devil," would apply very accurately to the negroes thus suddenly thrown upon their own responsibility.

The delusion of "forty acres and a mule" very soon destroyed the compulsory thrift characteristic of the black in slavery. He considered himself the foster child of the party that freed him. Slavery had merely bottled up the primitive instincts of the race; it had not destroyed them. All there was of thrift and stability in his character had been impressed upon him in a more or less arbitrary manner by his owners. It was not the product of that evolution which characterized the negroes of New York City, for example, who, few in number, had in general been exposed to an environment favorable to their social evolution.

Northern Whites and Southern Negroes

The influences of carpet-bag government, as depicted by Pike¹, were a very powerful factor in destroying negro respect for law and order in the South. The fallacious and pernicious teaching of the carpet-bagger gave the degraded black an exaggerated estimate of his own personal importance, based upon the market value of his vote. It also imparted to him the idea that behind

¹(?) "A Prostrate State."

him, as he went to the polls, stood an army of republican soldiers with bayonets fixed. Such influences have done much to increase the insolence and criminality of the lower-class blacks in the South.

The northern black has necessarily been surrounded by more inhibitory influences than he of the South. The lower classes of the northern whites, with whom the northern black has most frequently been brought in contact, have been better situated as regards opportunities for honest industry than the "poor white" of the South. The northern white, because of the climate and the influence of slavery, which is still felt, is more energetic than the southern white, and this necessarily has an influence for good upon the negro. The North has been more prosperous, and consequently his average opportunities for obtaining a comfortable subsistence have been better than in the South. The northern black has not been so much subjected to the mass influence of his own race, that is, he has been more individualistic than in the South, where the negro is segregated in large numbers. The mass influence in the case of the northern negro comes from the whites.

In order that civilization shall have a fair chance to influence the negro, he must have less opportunity for segregation than the South provides.

The quality and quantity of food obtained by the southern black since the war, as compared with that which he obtained before that great struggle, have been a factor in his degeneracy; he has missed his "hog and hominy." I do not think, however, that dietetics have had so important a bearing upon the question under consideration as the lack of systematic occupation conjoined with the forced assumption of responsibilities for which, by nature and training, he was unfit, to say nothing of the acquirement of vices and profligate indulgences for which he had no opportunities in his native wilds, and but relatively few while in bondage, and for which, while in slavery, he was held directly responsible to those whose interest it was to keep him in the best possible condition, morally and physically.

As slaves, the negroes were simply goods and chattels. Independence of thought and action was with them more theoretic than real, and had very little bearing upon their relations with the whites. They were accustomed to obey without question the dictates of their owners. Their environment was narrowing; their conditions for development of appreciation of their relation to the body social were peculiar; their thinking was done for them by others; they constituted a primitive social system within a higher one. The necessity for independent thought and action did not exist among them as it did among the whites. Attachment to the families of their masters and a general sense of obligation to the latter for their sustenance prevailed. Privation and want, those potent causes of degeneracy, were unknown among them. Personal physical responsibility for crimes and misdeeds was a prominent factor of their daily lives. Corporeal punishment was more awesome to them at that time than is the fear of the bullet or the rope today. Various inhibitory influences of plantation life were potent. Mass influence at that time resulted in something akin to *esprit de corps*. The advantage of good behavior—indeed, its absolute necessity—was a dominant influence in each little negro community.

Is Negro Criminality Strange?

With political turmoil, commercial confusion, and social disintegration surrounding him, is it surprising that the negro, thrown upon his own resources, should have developed highly criminal tendencies? What wonder that the attempt to materialize the chimerical dream of equality between the whites, with many centuries of civilization behind them, and the blacks, who were but a few removes from the cannibal, should have been productive of dire results? Loyalty to the master, respect for the mistress, and affection for the children of those who once cared for him melted away like dew before the sun under the circumstances in which the negro was suddenly placed.

The attempt of the southern black to adapt himself to his new surroundings prac-

tically began in this country with the close of our Civil War. Prior to that time he had no opportunity of demonstrating whether or not he could adapt himself to his social surroundings. Slow adaptation to environment is, of course, by no means confined to the black race. Some other alien races have been political, social, moral, and commercial misfits in this country. The Chinaman will never make a good citizen. Fortunately, however, his natural instincts do not partake so much of the primitive animal type as do those of the negro, for the Chinaman of today is the product of a comparatively high grade of civilization, or semicivilization, which is essentially ethical, has prevailed for many centuries, and has developed certain inhibitions upon the purely animal propensities. The artistic talent of the Chinese is in itself an evidence in favor of this argument, for, up to a certain point, *pari passu* with the development of the artistic sense development of the higher inhibitory faculties occurs. The industry of the Chinaman in his native land, to say nothing of what is exemplified in his relations to our community when he settles among us, is another important factor.

Miscegenation a Question Which Keeps Bobbing Up

The question of cross-breeding of white and black, like Banquo's ghost, is one that will not down. Legislate and moralize as we may, we can never erect barriers that will confine the stream of black blood to its own banks and channels. So long as human morals and human passions are what they are—and we can not hope ever to completely subvert them to American ideas of altruism—the black and white streams will intermingle. It is not possible that a distinctly black race, comprising millions, can survive in the midst of a larger community of whites. There are more than two million mixed-bloods now; what will the next century show? It is not possible for a stream of white blood to flow on, year in and year out, side by side with a stream of black blood—or, rather, surrounding the latter on all sides—without becoming con-

taminated by it. Struggle as we may a gradual blending of the two streams is inevitable.⁴ Even were it possible to prevent this, it would still be only a question of time when the negro race would insist on the practical application of those rights which are almost theoretic. The Fourteenth and Fifteenth Amendments, which have always been a farce or, at best, impotent, are then likely to be a serious bone of contention. Negro demagogues are likely to arise sooner or later, and the long-talked-of "race war" will become a reality.

An unfortunate and unavoidable feature of miscegenation laws is that they infringe on personal rights and conflict with the natural law of sexual selection. Such laws abrogate the constitutional rights both of blacks and whites who purblindly desire to intermarry. The right to the pursuit of happiness revolves largely around sexual selection. Miscegenation is an unmixed evil, to be avoided with all the power that in us lies, but there are bound to be certain individuals, both white and black, who—aside from merely animal impulses—like certain anarchical fanatics, can understand only the strict letter of the Constitution, and are blind to the advantages of any altruistic legislation that conflicts with it. Not only are they blind but rebellious. Let it be noted that miscegenation laws penalize moral matrimonial relations and put a premium on illegitimacy. Law or no law, amalgamation, like Tennyson's brook, goes merrily on forever.

There can be no question that extensive cross-breeding of blacks and whites would bring social disaster in its train unless there were a change in our present attitude toward the negro. Still greater disaster would, however, accrue to the negro himself, for unrestricted mingling of white and black blood would mean for him race extinction. The price he pays for an admixture of Caucasian blood is degeneracy of the deadliest type. Infertility and increased susceptibility to disease are slow but sure extermin-

(⁴)Only sterilization of the entire negro race can, in my opinion, prevent amalgamation. He would be a bold man who should even advocate this. It would be opposed on humanitarian grounds, to say nothing of its impracticability.

nators of a race. Possibly herein lies the final solution of the race problem. But then, will not the taint of black blood carry the white race with it down to destruction?

He who would argue that even complete amalgamation cannot possibly occur must necessarily ignore all facts in history bearing upon the fate of a race within a race, which show that the weaker and less numerous is inevitably absorbed by the larger and stronger. He also must ignore demonstrable facts in our own experience with negroes. It is well to remember that the proportion of blacks in the United States is about one-eighth that of the total population. This number is more than sufficient eventually to contaminate the white race with black blood, and the large number of whites in our social system is certainly sufficient to

absorb the lesser stream of black blood. Personally, I am pessimistic as to the outlook.

The statistics of the proportion of negroes of mixed blood are even worse than appears on the surface. We are wont to speak of the mixed bloods as negroes whose veins contain white blood. Suppose we reverse the proposition and speak of mixed bloods as whites containing negro blood; "what is sauce for the goose is sauce for the gander." Even though the logic of my proposition be denied for the half-bloods—in the case of whom one can climb to either side of the fence—it surely must be admitted for the quadroon, octoroon, and other grades of mixed blood. These are not negroes, they are whites with a certain proportion of negro blood. Is not this the handwriting on the wall?²

(To be concluded)

Hypertrichosis, or Hirsuties

How to Remove Superfluous Hair with the Electric Needle

By MAY CUSHMAN RICE, M. D., Chicago, Illinois

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"Electricity in Gynecology"

II

DIFFERENCES in susceptibility to and endurance of pain on the part of individuals is forcibly demonstrated in the operation of epilation by electrolysis. One patient claims that it causes scarcely any pain, while another complains bitterly and is even unwilling to tolerate it. I find, nevertheless, that in those who suffer least the pain increases in proportion to the number of hours of work done. When there are but a few hairs, scattered about the face, there is no difficulty in removing them without anesthesia, but when the growth is extensive, a local anesthetic becomes a necessity.

After using various applicatins without avail, I tried a cocaine solution by cataphoresis. This is an excellent anesthetic for minor electrolytic operations when the positive pole is to follow the cataphoresis; but

with a few minutes' use of the needle with the opposite, or negative, pole, the cocaine disappears. This fact led to the use of a small amount of adrenalin solution with the cocaine. By contracting the blood-vessels the adrenalin serves to retain the cocaine in the skin. This combination, properly applied, renders the operation practically painless for from one-half to one hour.

Anesthetizer.—To secure anesthesia, a high degree of concentration of current is necessary. A special anesthetizer, allowing an unusually large amount of current for the size of the electrode, is required. Such a one has been constructed for this purpose. This anesthetizer is invaluable not only for cataphoric anesthesia for this work but also for the anesthetizing of any small area to

²)According to the prevalent blindly illogical nomenclature, granting that my views are sound, the United States may eventually become populated by a dominant negro race. An individual with the smallest possible taint of black blood is classified as a negro.

be treated cataphorically, fissures and ulcers for example.

The instrument consists of solid block tin, surrounded by a hard-rubber rim which projects one-fourth inch beyond the metal. This forms a shallow cup, to be filled with cotton or flat pieces of lintine saturated with the solution. The metal disc is mounted on a metal stem terminating in a socket for the cord-tip. The stem is insulated with hard rubber so that it can be held firmly either by the operator or patient, as desired. The



Fig. 3



Fig. 4

size adapted to all parts of the face except the lip is one inch in diameter (Figure 3), and that to the lip is one inch long and half an inch wide (Figure 4).

Solutions for Anesthesia.—I keep on hand a bottle of cocaine hydrochloride, 10-percent, and one of adrenalin chloride, 1 : 1000. Before using, I mix the two in a dram-bottle, in the proportion of 3 parts of the cocaine to 1 part adrenalin solution, just sufficient to wet the cotton in the anesthetizer.

Choice of Poles

If a steel needle is connected with the negative pole and inserted into the tissues, decomposition takes place wherever there is contact with the metal, but especially at the point of the needle.

The alkalis, attracted by the negative pole, accumulate about the needle while the acids, repelled by it, appear at the positive electrode. The negative pole, in consequence of its alkalinity, softens tissue and renders it easy of absorption. It does not oxidize metals; therefore the steel needle, the advantages of which have been given, can be used. The positive pole is directly

opposite in character. Because of its acidity it hardens tissue, and this is not easily absorbed. The steel needle is oxidized, sticks in the tissue and consequently can not be used.

Therefore the negative pole is the one best adapted in all respects for epilation. By means of it we are enabled to concentrate the action of an alkaline caustic upon the papilla and completely destroy it without producing perceptible scars.

Technic

After selecting a needle suitable for the case to be treated, put it in the needle-holder and place it in a large-mouthed bottle containing alcohol. If the glass on the needle-holder is used, this acts as a support so that the needle is suspended in the alcohol (Figure 2). Test your apparatus for current and also for polarity, if there is any chance for doubt, as may be the case if several people use the same appliances.

When the patient has unfastened the collar, place the cotton pad, wet with warm water and connected with the negative pole while the anesthesia is being used, upon the upper part of the back, protect the clothing by covering the pad with rubber sheeting and take care that the metal cord-tip and connector are so covered with the rubber that they cannot burn the skin. So arrange the table or operating chair that the patient's head will be in a good light and as low as possible. Never attempt to remove superfluous hair with the patient in any other than the recumbent position. After thoroughly cleansing your hands prepare the field of operation by washing with liquid soap and water and then applying alcohol, either in full strength, or diluted if the skin be especially sensitive. Wash off the alcohol with boiled water before anesthetizing.

Now put a layer of cotton or lintine upon the anesthetizer and wet thoroughly with the anesthetic solution. Apply this, after connecting with the positive pole, to the part of the face to be treated. Gradually turn on 10 milliamperes of current and let pass for five minutes. Then turn off the current and reverse the two poles, connecting the needle-

holder with the negative and the indifferent pad with the positive pole.

In consequence of the adrenalin carried into the tissue the anesthetized area will be definitely outlined as a white patch. Anesthesia will be only partial at the border but perfect in the central portion of this patch.

With the thumb and forefinger of the left hand stretch the tissues firmly so as to show definitely the minute point of entrance of the hair into the skin. Then, following the direction of the hair-shaft—our only guide to the root and the location of the papilla beneath it—pass the needle in from 1-20 to 1-16 of an inch, until you notice a slight resistance. Turn on the current, 1-2 to 1 millampere, according to the size and location of the hairs treated. One-half millampere is sufficient for the lip, eyelids and bridge of the nose; the chin, neck and sides of the face require from 3-4 to 1 millampere; but that amount should never be exceeded.

At the junction of the skin with the needle a bubble of hydrogen appears. It is merely an indication that electrolysis is taking place, and as the same phenomenon would result from an introduction of the needle accompanied by the current in any part of the skin, it is not a sure index that the papilla has been reached and is being destroyed.

Leave the needle in a few seconds, varying from ten to sixty according to the strength of the hairs; this can be determined only after two or three hairs have been removed. Hold the needle steadily for a few seconds and then gently rotate it about the hair, when, often, the hair will move with the needle, showing that it has been loosened. Whether this occurs or not, after a few seconds remove the needle and with the fingers take the hair out, if to do so requires no traction. Otherwise, insert the needle and repeat the process. If possible it is best to destroy the papilla at the first insertion of the needle. The reintroduction of the needle causes

more decomposition of the skin and consequent possibility of scarring.

When the current is adjusted to the correct amount, leave it on throughout the sitting. The needle is more easily introduced with the current on and, the operation being practically painless, pain at the moment of contact with the needle (which operators generally attempt to avoid by having the patient complete the circuit after the needle has been introduced) is not a factor to be considered here. In the left hand hold



DR. MAY CUSHMAN RICE

a pledge of cotton or gauze which has been wrung out of alcohol, or other antiseptic solution if preferred, as dry as possible. With this frequently sponge the skin, removing the hydrogen bubbles and other products of decomposition, such as caustic soda and potassa, which appear upon the skin. Although these form only in small quantities, they are exceedingly irritating and will go on corroding the skin as long as they are allowed to remain upon it.

When a given area is anesthetized, it is desirable to take out as many hairs in that place as possible; yet, to avoid scarring, hairs should not be removed so closely to-

gether but that sound tissue will intervene between two points treated. The distance apart at which they should be removed will depend upon various factors, such as differences in the texture of skins and the strength and location of the hairs. More care is required on the lip than elsewhere.

The Number of Hairs Removable in an Hour.—As an hour is the average time of a sitting, patients at first are anxious to know how many hairs can be destroyed in that time. This will range from forty to one hundred and thirty, depending upon the difficulties in the case, the perfection of the anesthesia, and the skill of the operator.

After-treatment.—The best immediate application subsequent to electrolysis is water as hot as can be borne; this because of the determination of blood to the parts always following the use of the negative pole on any part of the body. This is succeeded by an antiseptic powder. The patient is instructed to avoid picking off the small eschars which tend to prevent infection and scarring and to dust with powder as often as desired. This I believe to be a better form of treatment than that with lotions and ointments, which, by keeping the skin soft, favor infection. Taking the above precautions, namely, care in cleanliness of hands, asepsis of the field of operation and sterilizing of needles, infection does not occur.

Effect Upon the Skin.—As a result of the electrolysis, at each point of introduction of the needle a red mark appears proportionate in size to the amount of destruction of tissue. In a day or two this is covered with a small eschar which comes off in from five to eight days, leaving a healed, slightly reddened surface. This gradually assumes a healthy appearance. In the healing process scar-tissue forms, but, unless too much current has been used, in such small quantities as not to be appreciable to the naked eye. The lip is more easily scarred than other parts of the face. Hence it is advisable for beginners to do a considerable amount of work upon the chin before attempting the lip. For the latter a fine needle with only 1-2 millampere of current should be used.

Frequency of Treatments.—Sittings may be repeated daily, different parts of the face being operated upon on different days. It is never wise to treat the same area oftener than once a week.

Since the death of the hair is dependent upon the destruction of the papilla, the question resolves itself into whether the papilla can always be destroyed at the first attempt. Beginners will fail, in difficult cases, to destroy every papilla and will get a considerable percentage of returns. Especially is this true when hairs have been pulled out, for this means of extermination adds to the difficulty by rendering the papilla hard instead of soft and by causing the root to change its direction. As described by the late Plym S. Hayes, when the hair has been pulled out, the root-sheaths are separated from the root and turn in upon themselves like a glove-finger. These blockade the passage, so that when another hair attempts to find its way through it seeks a path of less resistance. The consequence is that the hair-shaft, our only guide, is not in line with the root and papilla at its base and therefore it is very difficult to follow the root to the papilla. Thus it is apparent that the change in the direction of hairs caused by pulling them out furnishes one of the greatest difficulties with which the operator has to contend.

The inexperienced physician, seeing the decomposition of the skin and fearing a scar, will choose the lesser of the two evils and remove the hair while traction is still necessary. The papilla being but partially destroyed, another, somewhat weaker, hair will grow in its place.

Hairs which have been subjected to means of removal such as depilatories and shaving do not have their roots affected and therefore are more easily removed. The latter process, however, multiplies the number of hairs far more than the former.

The number of returns varies from five to twenty-percent with the character of the hairs, the technic and the skill of the operator. Even though some of the hairs return, no case offers so many difficulties that it cannot be completely mastered. Tedious as the task may be, one is repaid when a woman who

has long been forced to live the life of a recluse, because of her unsightly disfigurement, is able once more to mingle with the community without nervous torture.

A complete history of the case before beginning the work often prevents misunderstanding. If the mode of extirpation has been by extraction it is well to state positively that for a period of not less than two months hairs will continue to appear. It often is quite difficult to convince patients that from six weeks to two months is required for the growth of a hair. Being in the habit of pulling hairs out they believe those hairs which appear each day are the ones taken out two or three days ago. When merely the shaft of the hair has been destroyed but a few days need elapse to show an extensive growth. The downy hairs so treated having undergone stimulation require time for development and gradually coarsen for months or even years.

The fact that the eyes are extremely sensitive and cannot easily be anesthetized renders the operation for inverted eyelashes exceedingly difficult. By putting a drop of cocaine on the eyeball to relieve its irritability and using a weak current, a limited number of hairs may be removed at a sitting. Owing to the difficulties in the case, conditions such as light, position, good needles, and perfect sterilization of hands and needles must be present. The eyelids should be turned well back, a very fine needle used, and only a small number of hairs must be removed at a time.

Those who have suffered from this intolerable disease appreciate beyond measure the relief experienced by a permanent cure. I have in mind one old gentleman who had suffered for forty years and was finally entirely relieved by the electrolytic process. For years his wife, with a pair of tweezers, had performed the task of epilation weekly. Not knowing which were inverted, she had removed all of his eyelashes.

One day into my clinic came a fashionably dressed and otherwise very handsome woman, approximately thirty-five years of age, with a profuse growth of coarse black hair running across the face, almost even

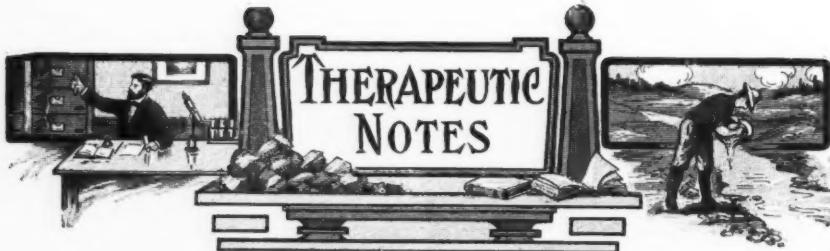
with the lobe of each ear, covering the chin and extending well down over the neck and throat. She told me she had had two hundred dollars' worth of electrolysis performed in one of the well-advertised facial parlors of the city. Completely discouraged at the continued reappearance of the hair upon her face, she besought me to make a trial. She proposed that I should consent to work on the basis of "no cure, no pay." If at the end of eight months the hair had not returned, she declared she would then pay me any price I might ask. I refused to negotiate on those terms.

For weeks afterwards the woman appeared at my office or at the clinic, fussing and worrying over her appearance and attempting to obtain from me some guaranty or retainer that I would be successful. One day she came in, cash in hand, and asked for an hour's sitting. The next day she returned and asked me to do some more work. Two patients failed to appear and so I gave her two hours. The third day she came again. At the end of a fortnight I had covered such a large area that her face was rather sore, and so I suggested an interruption for a week or more. At the end of three months her face was comparatively clean.

But just there the critical point, as in all other cases, appeared. When a patient has been watching the hairs gradually disappear and the face become comparatively clean, the memory of the extensive growth present before treatment was begun seems to grow faint and the demand for an absolutely clean surface increases correspondingly. As hairs come in that have been removed by means other than electrolysis and that have gradually been working upward, the patient, in spite of herself, will almost invariably become discouraged.

When the loss of faith is imminent the skilled practitioner will use the utmost tact in persuading the patient to keep up faith and continue treatments until the hair is all removed.

It took only seven months of judicious treatments to clear this woman's face and she has been one of the most grateful patients that I have ever had.



TREATMENT OF BRONCHIAL ASTHMA

The drug-treatment recommended by Dr. J. P. Oliver, in a recent article in *The New York Medical Journal*, is as follows: First, treatment during paroxysm is directed to the immediate relief of the patient. To accomplish this as speedily as possible, if the patient is an adult, he administers hypodermically morphine sulphate, 1-8 to 1-4 grain, and atropine sulphate, 1-150 to 1-100 grain, repeated if necessary in two or three hours. Sometimes, if the patient is neurasthenic, he uses hypodermically from 1-20 to 1-10 of a grain of apomorphine hydrochloride, and in addition 1-60 to 1-40 strychnine nitrate to prevent excessive depression from the effects of the apomorphine.

For constitutional treatment during the intervals the following is used: Potassium iodide, from 2 to 6 drams; corrosive mercuric chloride, 1 to 2 grains; 10 grains of ammonium chloride to dissolve the mercury; Fowler's solution, 1 to 2 drams; distilled water, 3 ounces. From a teaspoonful to a dessertspoonful, three or four times a day, beginning with the minimum and increasing to the maximum, is to be given.

HYOSCINE IN PARALYSIS AGITANS

This drug is very efficacious in decreasing the tremors of paralysis agitans, and if the complaint is in an early stage, the troublesome shakings of the hands may not only be decreased but in some instances actually abolished for the time being. Even in those more decided cases in which this drug only succeeds in lessening the tremor, the latter remains lessened for some days

afterward. The drug is given hypodermically in precisely the same way as one administers a morphine injection; and the dose may vary from 1-250 to 1-100 of a grain once daily. Some patients react to smaller doses of the drug than do others. The susceptibility to it should be ascertained in each case by starting with smaller doses, which may be gradually increased if necessary.

DIABETES

The treatment of glycosuria should comprise, says Burggraeve:

1. Strychnine to incite the nervous system.
2. Cicutine and camphor monobromide as antigenesics.
3. Salines to reestablish the alkalinity of the blood.
4. Quassin and sodium arsenate as digestives.
5. A laxative saline in the morning to refresh the blood serum and calm abnormal thirst.

THE IRON IN RUMEX

Babouriech and Saget have been experimenting upon the root of rumex and find that it contains nearly one-half percent of iron, a proportion greatly in excess of that yet found in any other plant. Further experiment shows that the iron is present in organic combination. It is difficult to isolate and identify such complex substances, but evidence was obtained that the compound is analogous to the ferric derivatives of the nucleones; these, as shown by Siegfried,

are present in milk and in the muscles and other tissues of the body. It is thought that iron, lime and phosphoric acid are carried from one part of the body to another in the form of nucleone derivatives. Many believe that a large proportion of iron administered in inorganic form is not assimilated in the body, and on this account various organic compounds have been introduced into medicine, including the glycerophosphates and so-called succinate of iron. The administration of iron as a nucleone derivative, as present in rumex, would appear to offer advantages over other compounds, and this view is supported by results following the administration of rumex by the mouth.

—*Practical Therapeutics.*

ESERINE SALICYLATE IN POSTOPERATIVE VOMITING

Dr. Charles H. Breuer, of Cameron, Texas, writes us as follows:

"I use eserine salicylate tablets for post-operative vomiting. You recommended it in CLINICAL MEDICINE, and I never had better success. Now I use them always when the patient tries to vomit, and they stop it at once. We never have had any trouble with vomiting or postoperative bloating since I commenced to use them. I would like to hear from others, who have had experience. It is a boon for laparotomies. The patient's bowels move freely on the second day after operation and as soon as the bowels move they 'feel like a bird'; they are sick no more, and can eat and drink with impunity, and never get so emaciated from starvation as patients used to do before I commenced their use."

PRUSSIC-ACID POISONING

A child had eaten freely of roasted bitter almonds. She was pale, temperature subnormal; pupils dilated, insensible and fixed; sight and mind obscured, breathing difficult, heart palpitating, pulse small, tongue dry and saburrall, much foam in the mouth. An emetic was not helpful; clonic convulsions came on, the pupils contracted, the

child became insensible; trismus, vomiting, urine and feces discharged involuntarily. The hair was cut and mercurial ointment rubbed into the scalp, an enema of coffee given, sinapisms applied with cold to the head. Patient grew worse. After leeches to the mastoid the convulsions ceased, the coma increasing. In this desperate crisis strychnine arsenate was given, and at once an improvement was manifested, and recovery ensued.

POISONING BY KEROSENE

Dr. H. L. Kerr, of Sparta, Mo., has given some attention to the question of coal-oil poisoning. He notes that in every instance reported the patient was strangled, and draws the inference that some of the oil penetrates the bronchial tract. The active principles in the oil, whatever they may be, are rapidly absorbed into the circulation. Locally the oil has not been shown to exert any deleterious effects upon the stomach, any more than it has upon the large bowel when thrown into it.

CATHARTICS FOR CHILDREN

Abt, in *The Archives of Pediatrics*, describes some experiments made with a view to testing the irritation induced in children by the use of the ordinary cathartics. He found children receiving one grain of calomel, singly or divided, showed irritation on the following day by the presence of mucus and occasionally of blood in the stools. Those receiving two or three grains of calomel at one dose showed both blood and mucus, persisting two or three days. When calomel was given in divided daily doses of 1-10 grain for some days, the reaction increased in intensity from day to day. Small single doses of magnesium sulphate, as one dram of the saturated solution, produced a little mucus. Large doses, after the third, showed the reaction for blood, but not as much as from calomel. Dram doses of castor oil produced no irritation. Two drams given at once caused irritation in one case, but not in another. Given in

dram doses to two children for three successive nights both showed irritation after the third dose.

ACUTE RHEUMATISM

"In acute rheumatism," says Prévault, "I had the average success with the old treatment, especially when employing blisters. Since I learned to attack this dolorous affection with veratrine and aconitine, it is with astonishing rapidity that it progresses toward the cure, while relapses have also become very rare."

THE ALKALOIDS VS. ALCOHOL

At the last meeting of the Society for the Study of Alcoholism and Drug Habits, Professor Waugh presented a paper in which he held that there is no use to which alcohol can be put as a remedy for which we have not better agents in the resources of modern therapeutics, and that alcohol, therefore, is not a necessity to the present practice of medicine.

This paper has been republished by the United States Senate, in Senate Document No. 48, and can be had by application to your Congressman or Senator. Nobody who feels any interest in the alcohol question—and who does not?—can afford to be without this valuable collection of papers, the latest pronouncement of the men who have most deeply studied the various problems resulting from the use and abuse of this potent spirit.

APHONIA, WITH HINTS FOR TREATMENT

Aphonia may depend on diverse causation. It may be sudden or gradual, direct or reflex; of nature sanguine, nervous or glandular; simple or specific. We may have nervous aphonia, that of singers, forms herpetic, syphilitic, etc.

The treatment must vary with the cause. Congestive aphonia would call for leeches and emollients, but as it is often the prelude of phthisis we must be chary of blood losses.

Aconitine and veratrine relieve congestion, hyoscyamine dissipates spasm. Give a granule of each every half hour, and apply sedative cataplasms to the neck.

In chronic aphonia we give sodium benzoate and strychnine, a granule each every two hours. Nervous aphonia often disappears, as if by enchantment, under strychnine, hyoscyamine and phosphoric acid, a granule of each every hour. The aphonia of singers is often instantaneous. A curious remedy, which was once deemed quite effective, was a glass of hot beer in which a tallow candle had been melted; the derivation following the shock to the stomach proving successful. A drastic cathartic sometimes answers the need. There is here laryngeal injection, with paralysis of the vocal cords; calling for aconitine, digitalin and strychnine, a granule each every two hours (Burggraeve).

But just imagine proposing the beer-tallow to a prima donna in a tantrum!

APEPSIA, AN IMPORTANT GASTRIC NEUROSIS

This gastric neurosis is too often overlooked, and the sad consequence of its neglect it too often tuberculosis. The cause may be psychic or physical. In convents and prisons tuberculosis frequently begins with apepsia. In one case a girl of 15 years displayed loss of appetite, the other vital functions suffering in consequence. Improvement followed clearing the gastrointestinal tract, but then the malady returned. A slight, frequent cough aroused fears of tuberculosis, but the physical signs were absent. She had continuous fever, pulse 120, temperature 102.2° F., the tongue slightly coated, lienteric diarrhea.

The treatment advised by Burggraeve was a generous diet, quassin before meals and sodium arsenite. In similar cases striking results have followed the use of saline laxatives and calcium sulphocarbolate, diastase and quassin at meals, and minute doses of copper arsenite, gr. 1-1000 hourly while awake. Hot salt-baths and rubs to bring the blood to the surface are of much value. If amenorrhea is present iron is the remedy,

and while the fever persists this should be given as quinine hydroferrocyanide. The diet should be rich in easily appropriated proteids, such as sea foods, eggs and junket or clabber, with abundance of pure fresh-fruit juices.

When this symptom group coincides with the establishment of menstruation the utmost care should be taken to comprehend the mental as well as the physical status. The awakening of sexual life sometimes occasions the beginning of bad habits; or the most astounding eccentricities of thought and emotion occur with some shy, quiet young maiden, whom nobody suspects of a deeper sentiment than a longing for fudge or a new hair-ribbon. A prolonged visit to seashore or mountain, or better a radical change in the environment and mode of life, whatever it may be, is often desirable. The heart-strings become tendrils, ready to seize upon any support within reach, whether it be a religious theme, a lump of masculinity, or a heroic opportunity, such as came to Joan of Arc. The difficulty is that nobody may be acute enough to fathom the child-woman's mind, and wise enough to give the budding impulses proper direction.

Withal, the physical condition influences so profoundly the mental and moral life, that it must not be neglected. If our little new-woman is found to be eating ashes, or chalk, or butter, there is a chance to modify her moral vagaries by supplying the need of her bodily framework. Thought may not be a secretion of the brain-cells, but if these are supplied with intoxined or impoverished blood, the product of mental functionation will be impaired in quality.

THE DOSE OF GLONOIN

Matthew finds the dose of glonoин required to reduce blood-pressure and relieve pain, headache, epistaxis and giddiness, when due to vascular hypertension, to be 2 minims of the official liquor trinitrini. This may be repeated in half an hour. Of sodium or potassium nitrite the dose is 2 grains, the action lasting two hours; of erythrol nitrite 1-2 to 1 grain, the effect

enduring six hours; of mannitol nitrate one grain.

These doses are usually too large, sometimes too small. Liquor trinitrini is not uniform enough in strength. Of the glonoин granules, 1-4 milligram each, many persons find one a dose too large for comfort. Half this dose should be given and repeated every five minutes till effect, by which all ills of under- or of over-dosage are avoided.

ALKALOIDAL TREATMENT OF CHOREA

A delicate boy, aged four years, after a fright began to show symptoms of chorea. He remained thus for three weeks, without sleep, unable to speak or swallow liquids. Treatment failed. He was then given a little milk with bromide, iron, etc. This was continued three months, without material benefit. For this case Burggraeve advised strychnine and hyosciamine, since there is in chorea paralysis as well as spasm.

Juhel reported a case of chorea in a boy six weeks old, nursed by his mother. The chorea was hemilateral, very marked. Juhel prescribed strychnine, after ether and iodide had aggravated the malady. A cure followed in three days, except for some grimaces.

AN OVERDOSE OF QUININE

An English Coroner's Court, says *The Medical Times*, has returned the verdict of death from an overdose of quinine. The woman had taken twenty-five grains, and this produced congestion of the brain, liver and lungs. The other organs were healthy. The overdose induced paralysis of the heart.

COLOCYNTHIN

Gubler termed this body the purgative principle of colocynth, but Burggraeve pronounced this a mistake, believing the purgative power resident in the resin. He found colocynthin useful in abdominal obstruction, when combined with hyosciamine, and often with strychnine.

SURGICAL AND GYNECOLOGICAL NOTES

BY EMORY LANPHEAR, M. D., LL. D.

THE SURGERY OF EPILEPSY

Operation is justifiable in every case of epilepsy where there has been injury of skull or brain-compression, decided improvement following in practically all cases and complete cure in a pleasantly large percentage. Exploratory trephining is scarcely more dangerous than exploratory abdominal section. Cysts and cicatrices may be found, removal of which gives brilliant results, sometimes. The objection that scars may form again is not a valid one since the location is changed; and cicatricial tissue following operation differs materially in character from that after-infection. Cloudy swelling, or edema, of the pia mater is often observed in epilepsy—even in nontraumatic; probably a "chronic inflammation," so called. This fluid should invariably be removed, as improvement almost invariably results.

LIQUID SOAP

A liquid soap, without the disagreeable odor and stickiness of ordinary soft, or green, soap, may be made as follows:

White Castile soap.....	300 Grams
Stronger ammonia.....	25 Grams
Alcohol	350 Grams
Soft water.....	325 Grams

This contains the same amount of soap as tincture of green soap. Cresol (10 Cc.) may be added to give it an "antiseptic odor."

RADIUM FOR TRACHOMA

Excellent results may be obtained in the treatment of trachoma by radium. Exposure for fifteen minutes every second day, about ten or twelve times, is sufficient. No results are visible to the naked eye—the papillary vegetations, the pannus and follicular granulations appearing unchanged.

But only a few applications of sulphate of copper afterward are required to effect what appears to be a perfect cure.

CURE OF PEMPHIGUS

Pemphigus neonatorum is now regarded as an infection of the skin with staphylococcus pyogenes aureus. It is treated by the same kind of antiseptic bathing as used for boils. After the bath the sores are to be covered with a 5-percent ointment of ichthylol in lanolin.

DYSMENORRHEA

Sometimes dysmenorrhea accompanies subinvolution, without any discoverable implication of tubes or ovaries; notably when the persistent heaviness and bagginess of the uterus depends upon an extensive laceration of the cervix. Examination of the nasty-looking discharge from the everted lips of the os shows nothing but staphylococci, and the endometrium is found free from bacteria. Cure is effected by repairing the laceration of the cervix. In such cases it is best to do this with silver wire or silk-worm gut, these stitches being removed on the tenth day when the torn perineum may be restored *ad integrum*; rather than trying to use chromic-acid gut for the cervix and doing both operations at once.

COLPECTASIA

As the result of numerous labors and sometimes of the introduction of various objects for purposes of masturbation, the vagina may become greatly dilated; as it may also from the extrusion of a uterine polypus into the vagina, where it may lie for months unrecognized. After removal of the cause, injection of a strong alum wash once or twice a day may reduce the vagina to

normal. But in some cases the dilation continues; particularly in those dependent upon labors, where there has been prolonged stretching and even rupture of the perineal muscles without destruction of the skin. If this is the case there is nothing to do save to make a close perineorrhaphy with excision of a large part of the vaginal mucous membrane; and also an anterior colporrhaphy in the worst cases.

TO CHECK SECRETION OF MILK

When it is desirable that the secretion of milk should be arrested, one Gram (15 grains) of ammonium acetate may be given four times a day. If pain is prominent a centigram (gr. 1-6) of morphine sulphate or two centigrams (gr. 1-3) of codeine may be given with it. At the same time the enlarged breasts may be covered with flannel smeared with equal parts of tincture of camphor and belladonna ointment and a binder applied. The breast-pump should not be used unless imperative.

HYOSCINE AND MORPHINE IN OBSTETRICS

Dr. J. A. Derugi in the *Medizinische Klinik* reports six hundred more to his one thousand cases of delivery by the aid of this combination. His conclusions are about the same as those of Gauss in a former series. Measurements of the amount of blood lost in 497 cases showed an average of 382 Grams, fully 95.16 percent of 571 deliveries being accompanied by merely moderate loss of blood. There was no morbidity in 536 cases, while in 17 there was some febrile disturbance of puerperal origin in 6, a febrile in 1, and nonpuerperal in the 10 others, the total morbidity being 4.68 percent. Of the 609 children, 7, that is 1.14 percent, were still-born, while 10 were nonviable. About 5.14 percent of the 609 children (i. e. 31) were asphyxiated and 9 of these children died within three days. In two cases death occurred from aspiration of amniotic fluid. Three children died between the third and ninth day; but 581

of the 588 children born alive left the clinic in good condition, that is, 98.8 percent. Is there anything better than this anesthetic in obstetrics! It is surely the "twilight sleep."

CONSTIPATION FROM MECHANICAL CAUSES

Gant calls attention to the necessity for considering the mechanical causes of constipation, which are often overlooked, the trouble being attributed to the better-known causes. In this class of cases, no matter how much time is spent in trying to educate the patient and improve his general condition, it is impossible to secure the desired result until the obstruction is removed. To accomplish this it is usually necessary to resort to some operative measure.

The following are the most frequent mechanical causes of constipation: Congenital deformities, which occur oftener in the rectum and at the anus than elsewhere in the gut; extraintestinal pressure, from cysts, tumors, inflammatory disease, etc., outside the bowel and which cause constipation by compression; strictures; malignant and non-malignant neoplasms; foreign bodies, either swallowed or formed within the gut; fecal impaction.

EXTRAPERITONEAL HYSTERECTOMY

In removing cancerous uterus, contamination of the peritoneum may be avoided by the Zweifel technic. An abdominal incision is made, the ovarian and uterine arteries are ligated, the uterus dissected out, the glands enucleated from above, the bladder and rectum separated from the vagina, but the vagina is kept unopened above toward the abdominal cavity until the two layers of the pelvic peritoneum, which have been divided in front and behind the uterus, have been accurately sutured. By this method the entire uterus can be drawn down under the bladder or rectum without invading the peritoneal cavity. After provisional suture of the abdominal wound, the uterus is extirpated *per vaginam*, any hemorrhage from

the vaginal arteries being prevented by the previous application of clamps to the perimetrium, which are later removed. The large wound cavity left after the vaginal extirpation of the uterus is filled with iodoform gauze, which is withdrawn on the tenth day.

MENSTRUATION AND EPILEPSY

Careful examination of clinical records shows there is a more than causal relation between the menstrual period and attacks of epilepsy, tending to corroborate the theory that epilepsy is associated with some sort of disturbance of the sexual centers. Strange to say dysmenorrhea has no association with the convulsive seizures so far as can yet be determined. Many epileptics have immunity from attacks during the period between menses. The convulsions appear just before or during the continuance of the flow in these cases of socalled menstrual epilepsy. Removal of the ovaries has often been tried; but these organs have nearly always been found to be normal. Excision of the tubes and ovaries does not give as good results as the administration of thyroid extract in this particular class of epilepsies. It should be given during the intermenstrual period, potassium bromide to be added only three or four days prior to the appearance of the flow.

APPENDICITIS IN GERMANY

The Berlin Medical Society some time ago appointed a commission to investigate appendicitis: its prevalence and proper treatment, as shown by statistics for 1907. In the hospitals 1344 cases were operated upon with a mortality of 14.6 percent. This is about three times as high a death-rate as a corresponding number of cases would show in American hospitals, for the reason that we operate much earlier, and upon patients who are so slightly affected that they would not be touched by the German surgeons, who call many of our operations "normal appendectomies." But, like our own experience, the figures from German hospitals show the vast advantage of early operative

work. Of the cases subjected to operation during the first forty-eight hours after the onset only 5.6 percent died; on the third day and after, 18.8 percent died. During the same period in the same hospitals there were 1021 cases of appendicitis not operated on, either because not severe enough or "hopeless" on admission. Had all of these been treated surgically, as would have been done in most American hospitals today, the mortality-rate might have been lowered to about 8 percent for all cases, and to 1.5 percent for the early operations, which is practically the same as our figures. Unfortunately the figures at hand do not show the percentage of recovery of the "innocent cases;" if more than 1 percent died the American rule to operate within the first twenty-four hours, whenever possible, would be shown better than the expectant plan of treatment, for selective operative treatment gives about 1.5 percent mortality in good hands, while medical treatment yields at least 8 percent of deaths, probably more.

CANCER OF THE INTESTINE

This is a curable condition if recognized early. It is more likely to occur in men than women, 60 percent of reported cases being males. The age of greatest liability is 50 to 70 years. As to location, the splenic flexure is by far the most common site, the cecum second, the ascending colon, transverse colon, descending colon and ileum being attacked in the order named. More or less symptoms of stenosis may occur while yet the case is operable; but when complete obstruction is present nothing but an artificial anus is possible as a rule. The chief late symptoms are: Colic-like attacks with visible peristalsis, borborygmus, feeling of fulness in the abdomen, vomiting, great relief after defecation, bloody stools, and severe tenesmus; and in about half the cases a tumor may be felt. Late cases show emaciation.

Diagnosis is not always easy. In the cases in which acute obstruction comes on without premonitory symptoms, the cases in which cecal cancer manifests itself in

a manner similar to appendicitis, and "in those cases in which the history points to some stomach affection, it is particularly difficult, especially if there is no palpable tumor. Operation must, therefore, be exploratory in some instances.

If, on opening the abdomen in a suspicious case, the tumor is not very large and there is no metastasis in the liver, peritoneum, or distant lymphatic glands, excision is advisable. Infiltrated lymphatic glands in the region of the tumor do not necessarily constitute a contraindication; they sometimes can easily be removed, and besides they are not always carcinomatous but often only the seat of inflammatory swelling. Extension to the adjacent portions of the intestine, the bladder, uterus, etc., does not offer an insurmountable obstacle to operation, but adds to the danger. In about one-half of all early operations there is a perfect cure.

CHRONIC INVALIDS

Every community has at least one woman who has been in bed for many years; frequently such a one is cured by Christian science, osteopathy and faith. More of them might be cured by a careful examination and scientific treatment; for often an infection has left gross lesions which only the surgeon or gynecologist can relieve by radical measures, or a growth easily removable is the sole source of trouble. Such a case deserves the most careful study, sometimes, to differentiate from conditions which should be treated chiefly by suggestion, for as Goodell long ago pointed out, "in the vast majority of bedridden or of sofa-ridden women, it is not so much an existing uterine trouble that puts them on their backs, as it is nerve exhaustion from some nerve-shock; in these days of mental overstrain, nerve-exhaustion (or neurasthenia as it is technically called) is a most common disorder in our over-taught, over-sensitive and over-sedentary women; it manifests itself by hysteria, by spinal irritation, by a lack of nerve-coordination, and by a crowd of reflex symptoms, among which those of a uterine

complexion often overshadow, and indeed outlast, all the others."

THE WOMB AND NERVOUS SYMPTOMS

Fortunately doctors do not now so often give "local treatments" to the womb for the relief of nervous symptoms as they did a few years ago. They are learning that mere erosions and displacements do not count for much unless accompanied by infection (inflammation); and that insanity, epilepsy, etc., do not depend upon the local trouble, though they may be aggravated by infective conditions and rarely caused by them. Yet it cannot be denied that improvement follows, for example, repair of a lacerated cervix (and curement for the accompanying subinvolution) even when the infection is not severe, by some process we cannot exactly explain; but it is very easy to understand how removal of a badly infected uterus and tubes may cure a toxic insanity, epilepsy, hysteria, neurasthenia: the source of toxemia is eliminated and nature given a chance to cure. Such cases are, however, not very common; so the medical attendant should be very sure of the existence of grave uterine or tubal disease before advising the "cleaning out" of the pelvic organs for relief of nervous symptoms.

HERNIA OF THE OVARY

Hernia of the ovary is a very rare condition. It is usually congenital, and when double, always so. The ovary may be in the labium majus or in the inguinal canal in the congenital variety; in the acquired it may find exit through the inguinal ring, the crural arch, the ischiatic notch or a ventral rupture. The fallopian tube sometimes accompanies it; the gut or omentum frequently; a part of the bladder very rarely. The inguinal variety is the most common. It is recognized without difficulty by the pain felt on pressure; that peculiar nausea and tenderness of the squeezed testicle or ovary, and by the swelling of the tumor just before the menstrual flux (Goodell). If

the hernia can be reduced a truss may be applied; if not, the sac should be opened, the ovary returned to the pelvis, the sac excised, the opening obliterated and the wound carefully closed to prevent recurrence. Should the patient decline operative measures a truss with concave pad may be worn to protect the ovary from external violence.

SOME CASES OF PUPERAL METRITIS

One of our worst faults as a profession is our tendency to dwell so completely on one idea as to exclude all others from our minds. We have so thoroughly learned the lesson of emptying the uterus and disinfecting it in puerperal metritis that we forget the value of physiologic medication when conjoined to this measure. Here are two illustrations of modern exact therapy as applied to these maladies in the malarial districts in Holland. Presumably everything here receives the impress of the plasmodium and the use of quinine becomes a matter of course. The intrauterine cleansing is not carried out as we now do it, which makes the benefits of the treatment all the more notable.

Landman records the case of a Hollandaise, aged 34, two days over confinement. She had a chill, followed by fever, pulse 122, temperature 102.7° F., breasts engorged, lochia arrested, face red, very thirsty, tongue red but moist, consciousness unimpaired. Treatment: Morphine subcutaneously, quinine 2 Grams by mouth in divided doses. She seemed better, and the fever subsided for two days. Then she collapsed; temperature 104° F., pulse 130, breasts flabby. Repeated the medicine, adding sulphuric acid. Next day she was worse; delirious, furious, bowels and bladder emptying involuntarily, thirst intense, pulse and temperature could not be taken or medicine given. In despair the doctor turned to the alkaloids, and gave every hour a granule of strychnine arsenate, every half hour one each of aconitine and veratrine. Under these she grew calmer, the fever fell, she slept some; and from that time gradually recovered.

Myntie reports another case, that of a peasant woman of 25, primipara, delivered by forceps, tearing the perineum. The third day came fever, abdominal pain, breasts swollen and tender. Gave 2.5 Grams of quinine, asague prevailed. The fever rose, the patient became unconscious, lochia very fetid, vagina burning hot. Irrigated with phenol and salicylic acid; gave aconitine and veratrine, a granule each every two hours, one of strychnine arsenate every hour. For three days she improved somewhat but did not regain consciousness. The uterovaginal injections came away cloudy. Then came a change, with wild delirium, higher fever and excitement. Aconitine and veratrine were given every quarter hour, strychnine arsenate every hour, digitalin and hyoscyamine every half hour; one granule each. She slowly improved until the eighth day, following which there was another access of fever, which was at once met successfully by resuming the active dosage with the aconitine and veratrine. No further difficulty was met.

VAGINAL OVARIOTOMY

Small ovarian tumors as well as pus-tubes may easily be removed through the vagina. Anterior colpotomy is performed by catching the cervix in a strong vulsellum forceps and pulling strongly backward and downward until the anterior vaginal wall is tense, cutting through the vaginal mucous membrane from the cervix to within a half inch of the meatus urinarius, then making an incision across the base of this cut, clear across the vagina, each outer end curving slightly backward; the two triangular flaps are carefully dissected off from the bladder by fingers and scissors and separation between uterus and bladder continued in the same way until the peritoneum is opened. The sac may then be tapped if ovarian; if a pus-tube, a large pack of gauze (with string attached) must be pushed up within the pelvis to catch pus when the abscess ruptures. After removal the wound is packed with sterile gauze, left three or four days.



Dosimetric Treatment of Tuberculosis

Translated from "La Dosimetrie," September, 1909

By GEORGES PETIT, M. D.

ALL the world knows that a great number of drugs have been extolled for the treatment of tuberculosis, and I avow in all sincerity that if there are any good ones among them, there are also those that are useless and even, perhaps, dangerous. The reader, therefore, is not to expect here an enumeration of all the medicaments employed in this affection. I am content to say that if our therapeutic arsenal does not possess as yet that heroic specific medicament which is capable of jugulating the disease at one stroke it is, on the other hand, very rich in precious substances which when used with tact are capable of accomplishing veritable miracles. I might easily furnish the proof thereof if I could do it without exposing myself to the accusation of boasting, in placing before the reader typical cases of cure obtained by a very simple method which employs no mysteries, but which is simply rational.

I certainly do not dissemble in saying that the art of accommodating and adapting medicaments consists mainly in keeping in view the result which is to be expected from them, and here everyone may introduce one or another modification according as a case may demand. This is what I do myself, keeping myself as nearly as possible to a line of conduct at any instant which daily experience alone can justify, and which the certainty of alkaloidal action enables one to attain.

The tuberculous person ought to, a long time before becoming sick, avoid taking any useless drugs, because sooner or later he will have absorbed such a quantity that their anodyne constituents may become actually hurtful, if not in themselves then by producing an antipathy against all medication.

The medicaments which the tuberculous person takes should respond to three indications: (1) specific treatment, (2) symptomatic treatment, and (3) general treatment.

The specific treatment comprises among others all the list of serums and vaccines. I will not venture to enumerate any of these, and only say that if there be not a single sure specific among them all, yet are there among them those of real curative value the choice of which should be submitted to the physician who alone can judge of their necessity or their uselessness. A happy action in this respect is displayed by the socalled antidiathermic granules, which are composed of strychnine arsenate, 1-2 milligram, helenin, 1 centigram, and tannin, 1 centigram, from four to eight of these to be taken in twenty-four hours. These granules modify rapidly the bronchial secretions and raise the patient's strength.

I also wish to emphasize the great value of calcium sulphide, which is known [in France] by the name of sulphhydral.

The symptomatic treatment has for its aim the combatting, not of the cause of the

evil, but its effects, i. e., the fever, the cough, dyspnea, diarrhea, perspiration, expectoration, pains, etc.

To the dosimetric arsenal, already wonderfully well supplied with arms of precision, has been added for the physician's use iodoform, the use of which Filleau highly extolled in 1886 when I was chief of his clinic; so also brucine, of which Galopin recommends to give three granules per day. Then, also, we may utilize, according to indications, the defervescent trinity against the fever; Gregory's salt against insomnia; emetine and codeine as expectorants; glycerophosphate of lime and iron as a reconstituent, and also hydroferrocyanide of quinine for the same purpose.

The treatment, we see, is complex, and the entire arsenal of medicaments might pass through the hands of one who is not experienced, while an informed practician may, on the contrary, reduce the whole of it to a minimum. One has to guard well against overmedication, with which we may sometime strike the disease, but more often the diseased patient.

There is one medicament which seems to me to have a constant indication in all cases, and this is strychnine. This I administer in large doses in the form of the arsenate, and almost continually or at least for a long time, allowing intervals of cessation in all phases of tuberculosis. We should give but few medicaments and only such as are strictly useful.

General treatment is only second in importance to hygienic and medicinal measures.

The tuberculous patient must have his dietary regulated with mathematical precision for it is claimed with good reason that tuberculosis is a disease of decalcification. The alimentary regimen should, therefore, be the same as the medication of the tuberculous patient, aiming at recalcifying the system. This is the only means by which to make the pullulation of the bacillus impossible and would also halt the progress of the tubercular process.

I have seen a number of subjects who unquestionably had the disease and which was accelerated in its march by an exagger-

ated and brutal attempt at forced superalimentation. A state of health is not the result of a corpulence, rapidly and artificially obtained, but the consequence of a general equilibrium of the economy. In judging the value of a person's weight we have to take into account his age, height, girth, habits, and antecedents. A tuberculous patient who has become fat is by no means a cured patient, he is rather one whose disease is aggravated, whose respiratory exchanges are rapidly diminishing, and consumption or the fatal end will appear the sooner the more his fatness is exaggerated. Forced superalimentation ought to be considered a danger, for the organism does not appropriate for its nutrition more than a certain quantity of aliments supplied, and it is compelled to burn the surplus. We have to come back to a rational and reasonable alimentation and abandon a method of feeding which in certain cases may become more dangerous than the disease itself.

I, for my part, am confirmed in this opinion by long experience and am a partisan of a vegetarian or a lacto-vegetarian regimen.

I could here equally criticize the treatment of forced rest and that of exaggerated ventilation if applied to the lungs, but this would necessitate a consideration of the physiology involved. I will only say that the important thing here is that the patients should know how to breathe. We can not attain here any good results except by methodical exercise. As to rest, it has to be proportionated to the amount of work done. To say "rest" does not mean "permanent immobilization." The tuberculous patient must know how to respire, what to eat, how to walk, and how to rest, and all these are but parts of his treatment. He must, therefore, be watchfully taken care of or else you will have done your task incompletely and insufficiently.

NATURE, FUNCTION AND PATHOLOGY OF SLEEP III

I am generally a decided opponent of hypnotics. A remedy of that kind should be taken only in exceptional cases, either

when a whole night was passed without sleep, or when, say, two nights in succession were passed with but very little sleep and then by midnight of the third day still no sleep has come. In persistent insomnia all known hygienic means must be tried first. Then, when they all fail, but not before, recourse may be had to medicaments. But even then we must use now and then the less harmful drugs, avoiding especially those which in time must be given in increasing doses.

Inasmuch as the indication in these refractory cases is the reduction of cerebral irritability, we should think first of bromine (1.5 Grams of sodium bromide in a tumblerful of water) or of valerian, or the mild combination of bromine with valerian as presented in bromural. Chloral is quite effective but rather more harmful. Less harmful is the chloral compound known as isopral.

If the insomnia is very obstinate, then we must resort to stronger and, unfortunately, more injurious remedies, such as veronal. Of this, if at all possible, not more than 1 Gram (15 grains) should be administered; more than this may induce toxic phenomena. Veronal contains urea, which some patients tolerate very well, while others complain of heaviness in the head after taking it.

At times a single dose is enough to produce sleep during the next night as well. In no case should the stronger hypnotics, such as veronal, opium, morphine, be given as a regular remedy, since they may injuriously affect cerebral action.

I would recommend another, a physiologic remedy, which is based on the observation that the absence or the degeneration of the thyroid gland gives rise to sleepiness; I have always administered it with good results. It is the serum of animals who have been deprived of their thyroid gland. The striking similarity of the symptoms of diabetes with those of Basedow's disease, and taking in account my researches concerning the frequency of thyroid-gland hyperactivity in the diabetic patients, I was led to try in these cases a remedy which had often proved of

benefit in Basedow's disease. This is a serum prepared according to the directions of Moebius from dethyroidized goats and this is called antithyroidin Moebius.

With this serum I obtained not only a reduction of sugar secretion in diabetic patients (as I have described in my work on "The Origin of Glycosuria"), but in cases of insomnia also where I used the serum I invariably observed improvement. Suffering myself from obstinate sleeplessness in consequence of an automobile accident, I tried the Moebius serum on myself and found that every dose of 5 Grams (75 grains) procured for me eight hours of refreshing sleep. The effect on myself and on my patients was decidedly far superior to that of veronal. It only is to be regretted that the price of the antithyroidin is so high and that comparatively so large doses must be used, these being ordinarily not less than 3 Grams (45 grains) three times a day. This is a pity, for this agent, lowering the irritability of the nerves considerably, is very effective, and being of a physiologic nature, it is harmless provided no larger quantities were given than those I have named.

As long as this preparation of Moebius is not cheaper I advise for those less able to pay to use the milk of dethyroidized goats.

After I had delivered an address before the Society for the Promotion of Therapeutics and Natural Sciences at Amsterdam (March 15, 1905) on the hypnotic effectiveness of antithyroidin, Prof. Lanz confirmed my experience and mentioned his own with this kind of milk, with which he treated regularly his patients suffering with Basedow's disease. He told how he had requested the keeper of his dethyroidized goats to try the milk experimentally on his dog. The peasant did so, but soon desisted because it made the dog sleepy all day long.

[From Dr. A. Lorand's monograph, "Das Altern, Seine Ursachen u. Seine Behandlung durch Hygienische und Therapeutische Massnahmen" (Senility, its Causes and Treatment by Hygienic and Therapeutic Means). This is a book of great usefulness, coming as it does from a thoroughly equipped

practising physician of Carlsbad. It should excite considerable interest, and, I trust, comment.—THE GLEANER.

SECONDARY EFFECTS OF MODERN REMEDIES

An abbreviated statement from Dr. Otto Seifert's larger work on the subject, as given in the *Apotheker Zeitung*, 1909.

I. ANTIPYRETIC, ANTRHEUMATIC, AND ANTI-NEURALGIC REMEDIES

Antipyrin.—Various and at times very difficult drug-exanthemata have been noticed. Antipyrin evidently acts as a poison on the walls of the blood-vessels, and the inflammation causing the exanthem apparently starts from the small cutaneous veins.

Aspirin.—The side-effects belonging to salicylic acid are headache and ringing in the ears, gastric phenomena of uneasiness, eructation, nausea and vomiting, stomach-ache. As further side-effects upon the skin and mucose there have been noticed various exanthemata and enanthemata. More rare side-effect observed are somnolence, a sense of deafness, diminished sensitiveness of the palate, tongue and throat, difficulty of deglutition, cardiac disturbances. Milk and alkaline water should not be ingested after taking aspirin so that the splitting up of the remedy may not take place too soon.

Attritin.—An aqueous solution of 17.5 percent of sodium salicylate and 2.5 percent of caffeine for intravenous and intramuscular injections. Occasionally this induces, in individual cases, pain, thrombi, tinnitus aurium, and tension-pains.

Benzosalin.—No side-effects have as yet been noticed, although the anodyne effects are missing in some cases and are so much the stronger in others.

Citrophen.—Toxic effects were noticed, these consisting of heart weakness, arrhythmia, cyanosis, cold extremities, perspiration, and a sense of faintness.

Diaspirin.—This is contraindicated in pulmonary phthisis and in all affections where sweating is undesirable.

Diplosal.—The untoward effects noticed were slight tinnitus aurium and salicylic inebriation.

Ester-Dermasan.—Effects slight perspiratory eruptions which do not disturb.

Euquinin.—Here and there this causes tinnitus aurium, heaviness in the head, and vertigo. In cases of idiosyncrasy there may be trembling of the lower limbs, vomiting, and a sense of heaviness in the stomach.

Euphyrin.—It hardly ever produces the formation of methemoglobin, but containing vanillin, as it does, imparts a sense of refreshing.

Glycosal.—After this remedy has been brushed on the skin freely, there often occurs perspirations, itching, a sense of giddiness, headache, tinnitus aurium, transient deafness, nausea and vomiting. Most patients complain of a bitter taste in the mouth when the remedy is taken internally.

Iodopyrin.—This produces, as a side-effect, profuse perspiration, coryza, conjunctivitis, and scratching in the throat.

Kephaldol.—There occurred nausea, vomiting, and an attack of profuse perspiration noticed after its use.

Kryegonin.—This at times causes strong perspiration, general depression, and restlessness.

Lactophenin.—Icterus is of relatively frequent occurrence, still, in typhoid it did not occur in spite of being given abundantly; however, at times there appeared in these cases disturbing and annoying attacks of perspiration; here and there, also vomiting, cyanosis, and collapse.

Maretin.—This, not rarely, evokes attacks of perspiration; now and again subicteric coloration of the skin and sclerotica. Collapse phenomena appeared frequently, also diarrhea, headache, and hemoglobinuria. Caution is necessary because of its tendency to cumulation. Against phenomena of intoxication inhalation of oxygen is recommended. The remedy is utterly unfit in pulmonary phthisis.

Novaspirin.—Very rarely gastric troubles or diarrhea were met with as side-effects from this remedy.

(To be continued)



The Average Doctor as a Laboratory Diagnostician

IT is my purpose to urge the use of laboratory work as an essential aid to physical diagnosis. The day has passed when guesswork, slipshod, snapshot diagnosis can be made. The old-time "therapeutic diagnosis" won't go now, either. I well remember one of my medical teachers who used to say: "If you suspect it is syphilitic, try potassium iodide and mercury. If he improves, that clinches your diagnosis." I wonder how many innocent people have been salivated by this advice. At a bedside I once heard a good doctor say: "Chills and fever, chills and fever—that calls for quinine." It proved to be gonorrhreal peritonitis!

I do not need to emphasize the fact that diagnosis is everything and that symptoms are but helpful guide-boards to diagnosis. Yet, I wonder how many average men are treating their patients symptomatically. I wonder how many prescriptions are written and how much medicine is dispensed for symptoms only. Medicine is still not an exact science, yet we make it far more inexact by treating symptoms and forgetting diagnosis.

The average doctor may be and must be a good diagnostician. He must drill into his head all he can of Butler and other good works on diagnosis. He may practise constantly with percussion, auscultation and palpation. Still he must do or have done laboratory work. I may say, he must do it himself. He may employ a laboratory

specialist in the exceptional case to confirm his own findings, but for the run of his cases, he must do the work himself. He cannot afford to pay the fees himself for every case, and the patient seldom understands why he should bear the expense. It is good business to do your own work—it is good professional policy.

Instead of investing that few hundreds you have saved in a town lot or in some highly praised stock of a mining or a manufacturing company, buy a good laboratory outfit. It will pay a good and certain dividend from the start. A small room, with running water, if possible, will do. Have plenty of shelving, cupboards, and a broad table or shelf for the several sorts of work. A good microscope with a sixth or eighth inch and an oil-immersion lens, and fitted with a good mechanical stage, is the foundation of the department. Now add your reagents and small utensils. A centrifuge, Bunsen burners, tubing, pipets, burets, beakers, flasks, test-tubes, etc., *ad libitum*. You may add an incubator as you progress.

If you have had no laboratory training in college, train yourself. Give yourself a course first in the study of urine. Buy Ogden (*on the Urine*) and then dig it out. You will feel like a boy again. Time? It will take some time, but not more than the average doctor wastes about the barber-shop or tinkering his buggy or automobile. Use the odd hours. It may cover a year, but it will be a great year for growth. Few, if

any, of the colleges give the student a thorough course in urine study. The younger men coming out know enough to begin intelligently.

"What's the use?" I'll tell you: better work, certainty in the treatment, closer hold on the patient. You know and they know you are doing the best work that anyone can do, and there is no use to change.

I am not going into details as to what benefit it is for you to know the urine contains albumin, acetone, blood, indican, as to the acidity index, etc. I am arguing the business importance of doing your own laboratory work.

While you are studying urine you will want to know something of stomach-contents examination. The bulk of your cases come to you for stomach or intestinal symptoms, especially your chronicities. You will buy the works of Boas, Ewald and others perhaps. You will try the test-meal and become skilful in the use of the stomach-tube and aspirator. You will soon learn to recognize the total acidity, the free and combined hydrochloric, lactic and other acids, blood, etc. You will make some good diagnoses, when but for this work you might have failed.

The examination of sputum for suspected pulmonary phthisis is so simple you may do it as a routine work. So also pus and other discharges. You may extend your bacteriological studies to a wide field if you have inclination. You may examine water and milk, and you may with cultures verify your first findings. It becomes a very valuable aid to diagnosis when the patient fails to give you a true history, or when age or condition prevents your knowing the true cause otherwise, as for example gonorrhreal ophthalmia in very young subjects.

You may wish to follow up the vaccine therapy. The future holds too much of great things to allow any live physician to ignore the laboratory method.

The study of the blood, fecal matter and pathological body-fluids is fully practical and possible in the doctor's laboratory, even though a small one. The microscopical study of urinary sediments alone will pay

you for all the expense and trouble involved.

It requires but little more equipment to examine pathologic specimens. Your own mechanical ingenuity will suggest ways to eliminate many of the more expensive tools. A cast-off razor, for example, will cut your sections as well as an expensive microtome. The same ingenuity will supply many of the utensils.

So by all means have a laboratory, and do there such study as will aid you in doing more certain and effective work, that you may hold your practice because no one can do any better for the people than you can, and they will know it.

It may be said that the doctor whose equipment for his work and whose activity accords with my picture is not an average man—that he is the exceptional doctor. If the average man did this kind of work, the struggle for business would be only that much keener.

I admit, as I said at the beginning, that it is all a question of the survival of the fittest; and he who says, "I will be one of the fit, the best that I can make of myself," he who plays the game fairly, in honesty and open square-dealing, who by competency and certainty in his work has no excuses and bamboozling explanations to make to disappointed patients—to such, it is hoped, these papers may be a healthy and stimulating encouragement.

It may be true, as has been said, a lot of good hack-drivers have been spoiled trying to make doctors of them, but the man who is a failure in the medical profession, either as a business man or as a doctor, has only to lay the blame at the door of his own stupidity or laziness, or both.

The price of success is work—intelligent, painstaking, scientific work—then, more work.

[We cannot commend too highly the spirit in this, the fourth, paper in the series on "The Business Side of Medical Practice," which we are publishing anonymously. The profession is beginning to wake up to the importance of laboratory work as an aid to diagnosis. The better element of young

practitioners is fully alive to the opportunities which this work presents for personal advancement. The man who does not wish to be outstripped in the race for success must fall into line with the rest, be prepared to do things, or he will see these youngsters coming up from behind, now "neck and neck," and finally carrying off all the professional prizes. If he has not the time to do the laboratory work himself (as many busy men certainly have not) he can at least familiarize himself with laboratory thought, learn its significance and get into touch with others who can do this work for him. Do it, Brother, you'll find that it will pay—and pay well!—ED.]

**SOME COMMENTS ON DR. MOELLER'S
CASE, ALSO ON "HOW TO GET YOUR
SHARE OF BUSINESS"**

Some years ago in a medical society of which the writer is a member, the criminal abortion question was up for discussion. There was one candid doctor in that meeting. He said that if his sister should get into trouble, as we know some of the best girls in the best families sometimes do, and an abortion became the only alternative, to save her honor and future prospects in life he would produce it. Of course nearly all of the members present at that meeting jumped onto him for this assertion, yet we know, as a matter of fact, that a large percentage of doctors are performing abortions under one pretext or another, provided the unfortunate girl belongs to a family of sufficient prominence.

A few days ago a prominent citizen related to the writer and another medical man, how he got out of trouble in his family. I will repeat it, as nearly as I can, in his own language.

"Mollie had got into trouble. It was a foolish kid love affair. Neither of them was fit to get married—and it simply could not be. So I applied to our family physician, a good man, for help. He was horrified at my proposal and told me nothing could be done. I took the next train for the city and went to Dr. X., a noted surgeon and old

acquaintance, and stated my case. Before I got through the Doctor waved his hand and said: 'Stop Mr. So and So. You are of course mistaken—but bring the young lady down and let me examine her and see what the matter is with her.' Mollie went down to Dr. X., stayed at the hospital a week and came home all right. I paid the doctor a good round fee for his trouble."

How did that North Dakota girl or wife ever get it into her head to write such a letter to Dr. Moeller as she did? Why, evidently because she had been told by other women in the same condition how they had been helped out. Her letter implies that she knows it is not quite legitimate, but nevertheless that it is done all around, provided the unfortunate has the cash. In the town she lives in all three doctors are doing it, or have the reputation of doing it, but just now the priest has got after the Catholic doctor. The other is too high-priced, and the third is too busy, and so she writes to the doctor in another town—perfectly rational and business-like and true to life. And I want to say to Dr. Moeller that he need not be offended at the action of that girl. If all three doctors in the town she lives in are doing abortions, why should she not suppose that Dr. Moeller is also doing it? The girl is not to blame. If any is to be condemned for this letter to Dr. Moeller it is the doctor doing the abortion by the wholesale.

In the editorial comment it is stated: "To bring the course of pregnancy to an end by sacrificing the life of the unborn babe, except to save the mother's life, can have no moral justification." I believe your statement is untenable. Let me relate a case within my knowledge:

A few years ago a good-looking and respectable girl was raped by a negro and impregnated. When the father of the girl realized the plight of his daughter he, of course, applied to his family physician and demanded an abortion. Two other physicians were called in consultation and an abortion was performed. These three physicians and the father of the girl violated the statute law and could have been criminally

prosecuted and sent to the penitentiary could a jury have been procured to convict them. Yet these physicians and the father firmly believe there was plenty of moral justification for performing that abortion—that in doing it they were obeying a “higher law” than statute law, just as the “underground railroad” conductor believed when he was transporting negroes from slavery to freedom.

The writer contends that abortion is probably justifiable when the mother is an imbecile or ironically insane and the father is likewise a degenerate, though the life of the mother is not in danger. In all cases of rape-impregnation abortion is morally justifiable. It is monstrous to suppose that a woman should be compelled to bear and raise the offspring of a brute that has ravished her, be he white, black or yellow—common law, statute law or any other law to the contrary notwithstanding.

Our criminal abortion code is in exactly the same relation to the higher moral law as the fugitive slave law was just before the war. Then all the politicians and officers of the law advocated publicly the enforcement of the law, but helped the slaves to escape to Canada whenever they could without detection. So it is with the doctors now. They all preach enforcement of the criminal abortion law, but violate it when the party in trouble appeals to *them* personally—that is where they feel morally justified in doing so,—not for the money that is in it, but simply to help a weak, frail victim of man’s lust, a fellow human being, out of trouble—simply to be the good Samaritan to one sister fallen among thieves.

It is, I feel, this good Samaritan spirit in doctors in general that makes it a noble profession, the noblest profession on God’s footstool, despite our many drawbacks. Let the priest and the Levite pass by the poor unfortunate in trouble, with their Holy Writ and common law under their arms; let the lawyer study his volumes of statute law and declare that there is no relief for the victim of man’s lust and brutality. Yet as long as the good Samaritan spirit dwells in the heart of the physician the wounds of

the bleeding victim shall be dressed with oil and wine. This is why abortion goes on, laws or no laws to the contrary.

* * *

How shall we get our share of the medical business in our locality? That is the question we all must solve, for live we must if we do nothing else. You say, Mr. Editor, that merit, not money, should count in achieving success. Yes, merit does count, professional ability does count, but all the tricks of trade called “business ability” count very much more in achieving success. The real, good, conscientious doctor is, as a rule, not a business man—he hasn’t time to acquire the art of mixing. Hence, as a rule, the real good doctor can only hope to achieve moderate success, never need to expect to occupy any of the prominent stations in the medical world.

I would change the phrase: “Medicine is a noble profession, but a damn poor business”—to read damn *mean* business, mean beyond any other profession or trade because of the methods of competition you are confronted with. The capable lawyer goes into court and his opponent must face him openly. The engineer can draw his blue print and specification and his competitor must meet it on even ground. But the physician fights the battles behind the curtains of the sick room and through the vicious tattle of erotic or hypnotized female mentality. I have seen in my time a number of instances where a good man has been run out of a good business by the malevolent tongue of a worthless woman—sometimes as the agent of a rival, and sometimes actuated by revenge for fancied insult.

Of late years we have another business wrinkle up in this part of the land—the trained nurse as a drummer for the doctor. It is getting to the point up here that a doctor cannot do general practice unless he has one of these trained nurses to drum for him. Some of us old fellows, who are either too old to fascinate those young attractive women, or else cannot learn this new trick, of the trade, are evidently going out of business. We shall soon have to invent some new specialty.

Then there is the hospital racket as an advertising machine. We have hospitals galore, two or three where one could hardly live, but it seems that we must have them or go out of business. You see the hospital management can get write-ups of the great work done at the Institution, of the wonderful cases and distinguished persons that have been there. As ethical medical men we try to procure such write-ups all we can, but as a rule we don't succeed, you know.

Then there is the relation between the druggist and the doctor to be managed. I know of an old doctor who has for over twenty years thrown all of his business to a certain druggist, and practically made the latter. But one fine day a new doctor came to town and took the fancy of the druggist, and after that the old doctor was "no good." The new doctor saw all the files of the prescriptions of the old doctor and the latter was done up in no time. That transaction made me aware that the practice of medicine is a damn mean business.

Now the doctor who can work all these agencies for his interest—the talking women, the trained nurse, the hospital and the druggist—is going to get the business and the cash, whether he is a competent and reliable medicine man or not. He may call any pain in the chest a pleurisy and tap for it, every cough incipient tuberculosis and give tuberculin, and every spell of indigestion appendicitis and operate for it—and "cure" all, and get credit for great skill both in his community and elsewhere; while the competent, honest, reliable medical man who cannot or will not command these agencies may do the most exacting scientific work imaginable, only to be, not only ignored, but condemned and abused in his home by the yelping curs of his big-man rival.

"Medicine is a noble profession but a damn mean business."

This applies to small towns with from two to a dozen doctors.

CHRISTIAN JOHNSON.

Willmar, Minn.

[Doctor Johnson writes well. He takes a strong position and he defends it ably, and

yet I must dissent from him on a number of points. While I do not think he so intends, yet his letter might serve as a defense of the too prevalent custom of producing abortion upon any woman that may come along. That this custom *is* unfortunately prevalent is shown by the very text of the doctor's article. Thousands of physicians *are* doing this thing and trying to justify themselves in it. What arguments can they bring to bear which will be sufficiently telling? Dr. Johnson comes to their aid with the fact that a young woman was impregnated by a negro during a rape. This fact he uses as an argument to prove "untenable" my statement that "to bring the course of pregnancy to an end by sacrificing the life of the unborn babe, except to save the mother's life, can have no moral justification."

Let us, if you wish, admit that here is an exception to the general rule—I might say an exception that proves the rule, for how many of the women who apply to physicians for relief can cite such a reason? Of the hundreds of thousands of abortions produced annually in this country I doubt if five are ascribable to such a terrible misfortune as this one. The number which occur in which the woman is not a consenting party is so small as not to be worth considering at all. The rule, as a rule, may stand as I have given it. The exceptions such as those adduced can be used only to bolster up a morally weak and ethically unjustifiable position. And I am not defending the seed of the rapist, the imbecile or the criminal, which I do not wish to see perpetuated.

But how about the doctor who, acting the part of the good Samaritan, violates the laws of the State (and many of us, at least, would add, the moral law) because some poor, weak, anguished sister beseeches him to help her out of trouble? Is he a "good Samaritan" who condones crime and, therefore, becomes a party to it? No, I say! By so doing does he not encourage the very immorality that gives rise to the crime? Does he not in the very illegal operation itself endanger the young woman's life? Yes, unqualifiedly yes! We all know there can be no other answer.

Our "good Samaritans" could accuse their brother physicians who refuse to do this thing of belonging to the "priests and the Levites" who passed by on the other side if their skirts were entirely free from the muck of self-interest—for what man among them does not seek to make this kind of business *pay*? A good Samaritan who pats himself proudly on the breast, asks the world to see in him a "good fellow" for listening to a woman's plea for help in time of trouble—then pockets his twenty-five or fifty dollars, after committing a crime, as the price of that help! The "priest and the Levite," who (possibly because they have consciences and use them) often need greatly—very greatly—the money which they refuse to take because they think it the price of wrong-doing, can not suffer much by the comparison.

I have used the word "crime." The lives that are destroyed by an abortion are as real as yours or mine. They are potential soul-lives, having in them no man knows how much of promise to the world. What right have you or I to destroy them? Some other time I am going to tell you of the great men who were bastards—poets, statesmen, great warriors, yes, even kings and popes.

In the second half of his article Dr. Johnson strikes some pretty hard blows—all the harder because there is a good deal of truth in what he says. All the underhanded methods of touting for business, such as he describes, we should condemn just as strongly as he does. Trickiness, graft, pretense, self-praise, falsifying about cases—all these things are used to get business; and if medicine *depended* upon these I should agree with the doctor that it's a "damn mean business." But in the long run *it doesn't*. That old saying ascribed to Lincoln that "you can't fool all the people all the time" still holds true.

It is becoming more and more necessary with each passing day for a physician to know his business and know it thoroughly. The pretense that passed for knowledge is not merely going out of fashion; people are getting to recognize it, and the "four-flusher" will finally be showed up by his fellows—and

that's one of the things that medical societies are (or should be) good for.

Really, I do not think this is half as bad a world or that our profession is half as "mean" as Dr. Johnson would make us believe. At heart most men *want* to do right, to be of service. Most of the faults we find in other men are due to the fact that we overlook their virtues—while we are hunting for the bad things.

But we should not forget that it is not enough that a doctor should know things; he must be able to do. The same qualities that make for success in any calling in life apply here equally well. It is important that we should make friends, and having made them, keep them. Isn't it well for us to try to do this? Isn't life after all sweeter, as well as more profitable, for so doing? Isn't it worth while from any point of view to make ourselves "mixers"—which means that we like other people and they like us—rather than to shut ourselves up in the narrow cells of our discontent and rail at other people—and the world? Yes—that's my answer.—ED.]

FOREIGN BODY PASSED FROM THE BLADDER

The following case may possibly be interesting to some of your readers; it certainly is unique. A young man came to me complaining of intense pain in the bladder, frequent micturition, and during the next few days he began to pass almost pure blood, thoroughly mixed with the urine. The history of the case was as follows:

The man is a chauffeur and during his stay with the owners of the car joined a summer athletic association. Part of the initiation consisted in several of the members holding him, *vi armisque*, and introducing one of those long sticks of solid paraffin (the kind housekeepers use in sealing their preserves in jars) into his penis and lighting a match stuck in the end of it. During his struggles part of the taper was evidently broken off and was causing the trouble. *Rhus aromatic* and atropine controlled the hemorrhage for a day or two, but it returned as bad

as ever. I told him the only thing to do was to open the bladder and remove the wax.

He put it off for a day or two, luckily as it turned out, for one morning he literally danced into my office, and in his hand he had two pieces of the offending taper, which he had passed naturally. I think they had been in one piece and were broken in passage, as he said he tried to help it out by pinching his urethra. One fragment was 39 mm. long and 5 mm. thick, and the other 34 mm. long and about the same thickness.

I think this case is quite unusual, both in the method of the cause of the injury as well as in the passage of such a large foreign body without assistance.

HUGH JAMESON.

Titusville, Pa.

Well! Wouldn't that flabbergast you!
What will young fools do next?—ED.

CROTALIN IN TUBERCULOSIS

Dr. R. E. Dean, Three Rivers, Mich., writes: "I commenced giving crotalín to a woman sixty years of age who had been suffering with chills, fever, etc., for about six months. Fever averaging about 102° F., but not continuous. During the use of crotalín this temperature dropped to nearly normal and considerable strength returned. The first twelve injections caused much swelling and pain but after that time they were no more painful than any hypodermic injection. After stopping the use of this drug for several weeks I find the symptoms returning, so am quite convinced that if taken when tuberculosis was in its incipiency it would be the most beneficial treatment I have found. The effect is much better when the bowels are thoroughly clean and disinfected."

THE JUICE OF THE PLANTAIN IN TUBERCULOSIS

Dr. J. Montelvo of Brazil, South America, has published an article in which he claims that the juice of the plantain, or the ordinary cooking banana (*musa sapientum*),

works miracles in the cure of tuberculosis. He says that he was called to visit a man in the advanced stages of tuberculosis, with frequent cough, abundant expectoration, night sweats, high fever, extreme emaciation, diarrhea, anorexia. History of tuberculosis in the family

The juice of the plantain was ordered, preference being given to the variety known as San Tomhe, which is the strongest. A large stock of the plant, about fifty centimeters long, was cut daily, and the juice expressed in the sugar-mill, after which it was filtered and kept in bottles. A wine-glassful of this water was taken by the patient every two hours during the day, and after three days of this treatment he was able to walk around; the cough and expectoration soon disappeared, the appetite returned, and it is claimed that after two months of this treatment there was complete convalescence. Other members of the family have also been cured of the disease by the same treatment

The juice cannot be preserved for many days, as it is prone to ferment, thus losing its tonic properties. It is claimed to be useful in gastroenteritis, acute tonsillitis, laryngitis, etc.

CARLOS F. SECORD.

Chichicastenango, Guatemala.

EXPLAIN THIS CASE—SOMEBODY

While attending the meeting of The Ohio Valley Medical Association at Evansville, Ind., I was witness of a remarkable circumstance in the lobby of the Vendome Hotel. After dinner, while talking with a friend, a man somewhat over six feet tall approached the clerk and after a moment's conversation addressed the people who were sitting about, as follows:

"Gentlemen, I propose to give you a unique exhibition, and I have no accessories outside of my own body. I am six feet two inches tall and I shall demonstrate to you that I can make myself grow taller in your presence until I reach the height of seven feet."

This man then made a series of movements, as though forcing himself upwards.

from his hips, and the result was that in less than five minutes his height was increased to seven feet, or ten inches more than his normal height. There was no *legerdemain* or optical illusion in this. The cold, hard fact was patent.

The man then assumed his normal condition and gave another illustration of his curious makeup. Standing beside a chair, with his left hand touching it, he placed a boy twelve inches distant from his extended right arm and with some peculiar motions the right hand gradually reached out, without moving the body, until the fingers touched the nose of the boy.

To me this was an interesting as well as an unexplainable exhibition. Perhaps some others who were at the meeting saw the "show" or have seen it elsewhere, and may be able to offer a solution of the problem.

W. T. THACKERAY.

Chicago, Ill.

WHAT EVERY DOCTOR SHOULD HAVE AND WHAT HE SHOULD DO

First of all, the doctor should be the proud possessor of a good, healthy, quick-acting brain, and then have the mechanical training to put in effect the action of its intelligence. If there is any place in the world that needs a quick-acting brain and a mechanical genius it is the country and small country town. Up to the present time these places have been cursed, to a greater or lesser extent, by the nonprofessional quack or the unequipped physician. Many physicians practise for many years in the country and smaller towns in a little, old, dirty, spit-stained office, or without any office at all. This thing should no longer be the case, for it is not only a drawback to the success of the doctor but a dangerous example to set before the layman.

Nowhere, at least here in America, is there a place that has not good mechanics either in wood, stone, brick or concrete. And any doctor who is practising medicine should be able to prepare for himself at least a few things for emergencies. He

should no longer send all his best-paying practice away to the larger cities, to men who are no more competent than himself to perform minor operations. Almost every home now has at least one room that can be made clean and reasonably aseptic, and nurses can be had in almost every remote corner of America, and any doctor can provide himself with a small operating room and equip it very cheaply, so that he can at least take care of all emergency-cases and assure the neighborhood of reasonably good service, as well as making his own hold stronger professionally and financially.

The following is a description of a room prepared by the writer in which he does almost all the operations and with as good success as could be had in the larger hospitals of the metropolitan cities. Only a few days ago he performed a successful appendectomy on a six-year old child. The room is built of brick, plastered inside, with a concrete floor. It is small, only 12 by 14 feet, but well lighted from a skylight, good illumination being the most essential thing for an operating room. The equipment in this room is metal and enamel goods, consisting of an operating table, stool, instrument case, irrigating stand and gasoline sterilizer. This room can be made aseptic and in less time than many of the larger operating rooms of the larger places. The success of surgery greatly depends upon the amount of energy displayed in keeping everything clean.

Any doctor who knows anatomy and has any mechanical genius at all can take care of almost all the surgical work that comes within the range of his practice if he will only cater for it; and I believe, if you pretend to be a doctor, you should be a good one. If not, get out, and let someone else in that will be. Human life is too precious to be trifled with by the man who does not know or will not do.

Any doctor that has read THE AMERICAN JOURNAL OF CLINICAL MEDICINE for five years, who is a graduate to start with, and has not come to the front and felt himself competent for the emergencies must be stupid indeed. For this journal has been

a greater revolutionizer of the practice of medicine and its branches than any other publication in the world.

GEO. H. INSCOR.

Holly Grove, Ark.

A TRIBUTE TO MY FAITHFUL CO-WORKERS WITH SPECIAL REFERENCE
TO TWO

Every success worth while depends upon cooperation, mutual boost, shoulder to shoulder, and with hearts in harmony to a common end, beginning with a right idea dominant in one mind and evolved through the combined effort of the many, for mutual benefit.

Since this is our annual Progress Number it is peculiarly fitting that I should take this occasion to pay tribute to the co-workers who have done so much to contribute to our success during the busy, teeming years that have passed since I first planted, right here in Ravenswood, the seed of our therapeutic faith, which is so rapidly growing up into a mighty tree—yes, a very forest of achievement.

There are many of these helpers still with me, all dear to my heart, some of them with me for years, to all of whom I should like to allude by name. But space and time forbid. Yet time is passing, other partings like those recorded here may come, similar occasions for the just word of praise, but not I hope for many years. These dear helpers who have been with me and striven and fought by my side are drawn to me by stronger ties than those usually holding together employer and employee; they are all my friends, and our association is not one which can be or shall be lightly broken. I am with them, work with them, every day. They know!

In previous pages of this issue I have given special prominence to the life and work of dear Father Epstein, who has contributed so much to making the CLINIC (I still cling to the good old name—it was my first love) what it is. In this place I want to say something about two sisters, Emily and Ida Richter, both of whom have recently left our service

to enter different fields, and who, at the time they left outranked in years of service all other employees. Many of our visiting friends have met and doubtless will recall them both.

Emily Richter, with one exception, was my very first helper, and Ida began to work for "The Doctor" the following year. Yet both are still young women, in the very prime of life, which shows with what tremendous speed and inherent vitality this work of ours has taken form and attained to full manhood-growth.

With me, from the very beginning, as shown in the little picture of my first helper-bunch, the influence these two young women have had on the build-up of this business, its forms, its methods and the personnel of its growing employed force can only be appreciated by those who know because they themselves are part of it. One in himself is but little, yet the force of example and uplift association is great, and good work goes on and on to end only with time and limited only by opportunity—the leaven that leavens the whole lump.

When Emily came I was a young doctor, practising medicine here in Ravenswood, a Chicago suburb. I had tried the alkaloids in my own practice, and liking them better the more I used them I wanted to help other physicians, first by supplying them with remedies that could be depended upon, second, by disseminating practical ideas concerning their use. It was this feeling which led to the establishment of this journal.

I was very busy with my professional work, and for some time the manufacture of the active-principles was only a "side issue." There wasn't enough in it to keep even one girl busy all the time, so that when Emily got out of work I sent her outside, all along the North Shore, to do practice-collecting for me, which ground she later covered for a time, introducing the alkaloids—telling the doctors of our infant work—and doing it well. This state of things didn't last long. The time soon came when I had to have other helpers, even a stenographer and typewriter. (At first all the correspondence was done—late at night—with my own

fist.), and then Ida came into the business, during its second year.

It wasn't long before expansion commenced, and at a tremendous rate. I started THE CLINIC, which was a success from the very start. More helpers came in. Some (most) staid with me—many are still here—and some stepped aside, most of the girls, into the broad highway of matrimony.



The first picture of my first little "bunch", taken on the rear steps of my house, where, in my rear office and in an open attic, the business was then conducted. Emily and Ida at the top.

Ida and Emily staid on the job. As the business grew they grew with it. They knew the details (most of which they themselves had helped formulate) even better than I did myself. Willing to do anything that would boost, as needed in every success, they put their very hearts into our work and helped, with all their strength and unusual abilities, to make it what it now is and to shape it for what it is going to be.

Naturally they *grew*, growing, in the most natural way possible, into important positions; Emily into charge of the order department, with its great details; Ida, of the typewriting and stenographic force, now numbering over fifty workers which, trained under her careful supervision, it would be hard to beat. The latter also served as my own private secretary, and as such attained a familiarity with the inside workings of the business, which has proven invaluable to me. She is a natural business woman; careful and conservative; absolutely uninfluenced by the showy externals which too often lead us astray; full of "nerve"—genuine ability—and having business judgment second to none. The same is true of Emily.

About two years ago Emily made up her mind to become a missionary. This was not any sudden decision, born of a temporary emotionalism. It was the expression of a long-felt desire for a larger service to others. She took a course in missionary training in this city, still devoting what time she could spare to our business; then, about a year ago, she went to Armenia. She was stationed at Hadjin, a name which many of you will recall—all who followed the newspapers during the late terrible Armenian massacre.

It so happened that when this terrible outbreak occurred Emily was in attendance upon a missionary conference at Adana, in the very heart of the district where some 15,000 to 20,000 Armenians lost their lives. Two of the Hadjin missionaries, also in Adana at the time, were killed. Every day, with all its hard work and sacrifice, was a day of agony, which they expected might be their last; but we know that Emily, like many other of these brave young men and women, would not and did not lose her nerve. Instead of thinking of themselves they thought of the thousands of bereaved and suffering needing their care—what they could do for them.

Nor did Ida, here with us, lose nerve. For weeks we got no word from Emily. We scanned the newspapers every morning with fear. Ida, however, throughout expressed perfect confidence, with deep Christian faith, that her sister would come through all right—and she did.

For several years Ida has been planning to go west and build a little home of her own, a pretty bungalow on an acre or two of land, in sight of Mount Ranier. She has near relatives at Seattle, a brother, a sister, and a nephew (The whole family is *right*.) who is in charge of our Northwest Branch. Naturally she wished to be near them. During our fight of the last two years I urged her to stay with me, it being almost impossible to spare her; but now that we are "out of the woods" with a clear road before us, she felt that we could and really must let her go, so finally I reluctantly consented, and she had her way—as usual.

When the date was set for her departure, some of my girls came to me with the plans for a good-bye surprise-dinner. Everything was "framed up," and all they wanted from me was my approval and my presence. They got both. The dinner came off as

the outdoor garb and hurry off to home or pleasure. I doubt if Miss Richter ever heard the bell—her work ended when there was no more work she could do."

Dr. Burdick said: "She has personally trained many young men and young women



IDA RICHTER



EMILY RICHTER

scheduled on the evening of November 13, and later in the evening the whole party "took in" a Thomas orchestra concert. About thirty of our oldest and most trusted employees and associates were present. We had a royal good time, giving Miss Richter the best "send off" that we knew how. "Yours truly" presided and after-dinner speeches were made by Drs. Waugh, Burdick, Thackeray and Butler, to which Miss Richter responded. We can only quote here and there a sentence from these speeches:

Dr. Waugh said: "Nobody had more fully at heart the interests of the Company; nobody as completely understood the business down to the last detail. Her influence was always exerted for the good of the business, never for her own. Others might await the sound of the closing bell, to drop their work and hasten to don

(and I am proud to be counted one of them) to do their every duty to the minutest detail, forgetting nothing, slighting nothing, sparing no pains. And for this reason I consider her perhaps the strongest force for the organization of business detail which we have ever had in our establishment, outside of the Doctor himself. The best legacy which she leaves behind is this organized force of bright young business people, carefully trained, earnest and conscientious—a powerful constructive force."

"Mr. Clough said to me one day: 'Don't you know that it is a great business education to work for Dr. Abbott?' I agreed. It is. From the Doctor we get the inspiration, the enthusiasm, the optimism, to make our enterprise, as we hope and believe, eventually the greatest power in medicinal therapeutics in this or any other country.

We have also been getting, thanks also to Miss Richter, an education in the technics of business without which all this enthusiasm and hopefulness is but a *common ordinary noise*, just 'sounding brass and tinkling cymbals.'

Dr. Thackeray said: "In Miss Ida Richter is embodied unwavering loyalty to the heart's core, and with the courage of her convictions she has, for lo! these many years, made her position known and felt, not only by Dr. Abbott, but by every member of his staff, nor has this been done arrogantly, but in such a convincing manner that we have learned to respect her judgment and to esteem and admire her personality."

Dr. Butler said: "We all know you so well that it seems unnecessary to wish you happiness and success in your new home, when by all God's rules of life we know that success and happiness are sure to be yours. Yet I imagine that now and then, in the quiet twilight, you will think of those days which were woven into weeks of joyful labor for Doctor Abbott and the weeks rolled into harvest months of triumph and the months bound into fifteen golden sheaves of years.

"In my mind's eye I can see you in your western home surrounded by flowers—and Angora cats sitting on your porch—

"When the silvery lances of twilight fall
And the roses tangled around her sill,
And over the rustic garden wall,
The jasmines shine and the jasmines spill.

"Where the birds are winging and warbling up,
Out of the golden western air,
Lily to lily waves its cup
And drinks of dew to the roses rare.

"Where rain drops ripple from turf and tree
And quiver and quiver with hearts of fire,
And daintily over the leaf and lea
The zephyrs hang with sweet desire."

Miss Richter, though taken totally by surprise, responded in part as follows: "I want to say that if I have had any success

at all, if there is any secret to my success, it lies in this: I love my work. I have always loved it, and the people I have worked for and with. I have had a little motto posted on my desk for a long time (I cut it



DR. JAMES L. NEAVE

out of a gardening magazine, by the way) which I think is very applicable:

"To business that we love we rise betimes
"And go to't with delight."

"That is the way I have always felt when I have gone to work. I have never disliked it, I have never dreaded Monday mornings. I can truly say, from my heart, that I have loved my work, and have felt in doing it that it was not the ordinary work of the ordinary manufacturer, but that I was having a small part in something that was for the uplift of mankind.

"It is not because I do not love my work that I am leaving it, but I do not wish to stay in business until I have no more ambition left, until I can no longer enjoy it or anything

else. I do not feel that way now, but of course I would reach that point in time, and so I want to leave while I can still enjoy life.

"I have always loved nature and animals, and I am glad I am going where I can have the glorious mountains all about me, and my flowers and bird and cat and dog. I have always wanted an 'all-my-own' dog, and now I am going to have one. In the West I shall always live in God's out of doors.

"After hearing here tonight your loving words I am almost sorry I am going away, and I want you all to know how sorry I am to leave you."

There is much that I might say, much that I should love to say, of appreciation and praise of the splendid, loyal work of these noble young women, but they know that it is all in my heart, and cannot be made stronger by the mere saying of it. So I will close with the toast proposed by Dr. Burdick:

"Here's to Ida! May her prunes grow as big as apples and her apples as big as pumpkins, and all sell as well as Abbott's Saline Laxative; may the roses bloom all the year 'round, on her cheeks as well as in her garden; may her chickens all lay double-yelked eggs, and two or three a day each; may her Persian cats become as numerous as the army that crossed the Hellespont, and come to a less untimely and more profitable end; may the sun of prosperity, and love, and happiness shine upon her garden spot and in her heart for ah! these many, many years! Here's to Ida—and Emily too—God bless them both!"

W. C. ABBOTT.

Chicago, Ill.

DR. JAMES L. NEAVE

Those who have read Dr. Neave's articles on Indian life, published in this and the pre-



The home of Dr. E. M. Ritter, Williamsport, Pa.

ceding issue of CLINICAL MEDICINE, will be interested in looking at Dr. Neave's face, shown on page 90. The picture should have appeared with the article, but it reached us a little too late.

I GIVE TRIBUTE

The long-treasured pictures, next pages, are of the beautiful prairie home and family now broken by the passing to the "Great Beyond" of the good wife of the "original alkaloidist" of the great little big state of Oklahoma, Dr. E. D. Easter. This home is a place where love prevails and good medicine is practised.

It was my personal good fortune, some years ago, shortly after the opening of the "new strip," to be privileged to recuperate here for a few weeks, marking an occasion of personal pleasure and physical uplift never to be forgotten.

I wonder if the good doctor still remembers the four cases of pneumonia we found that cold morning in early spring away out in a poor "sooner's" cabin, with dirt floor and only one bed—a mother in "the bed" with a few-days-old baby, a year-and-a-half-old on a box-bunk in the corner and two others on old chairs set face to the wall in the "lean-to" outside.

Our visit was the doctor's first call. There was no question about the diagnosis.



Dr. E. D. Easter, his wife and daughter

They were all severe, well-developed cases, doubles and singles, in the congestive hepatisation stage.

Fear said "grave-yard." Judgment was inclined to "back," but alkaloidal enthusiasm (we had been talking it all the week) encouraged Hope to say, "No! we'll knock 'em out;" and with the dosimetric trinity, the defervescent compound, the intestinal antiseptics, calomel and the saline flush we did it, carrying every one to complete recovery.

Dr. Easter knew how to abort (modify and shorten) pneumonia. He had been doing it for years. He's been doing it ever since—one of the great and rapidly-growing army of optimistic, resourceful country therapeutists, made so through success, and who, practising get-there medicine, positive-therapeutics—*know* what can be done for pneumonia, for typhoid "and what not," because they are doing it every day for themselves.

"I do not understand," says Dr. Easter, "how an intelligent physician who wants and means to practise up-to-date medicine

can even try to get along without the alkaloids. I should surely tie up my "pill bags" and quit the business if I had to use again the old-style drugs."

Who is "authority?" The man who knows and knows he knows because he has done things at the bedside, not once, but many times. I haven't seen Dr. Easter since. I have heard from him but rarely and not for a long time. Here's his last letter.

"I must say for true knowledge the January CLINIC [1909]. This is a year old.—W. C. A.] is a hummer.

"Keep a grinding! you are coming to the front. Yes, I am using the alkaloids and nothing else to speak of. The home you see in the picture I am sending you was paid for by the use of the alkaloids.

"I have just got through with a case of pneumonia treated strictly according to alkaloidal methods—was called the day after the initial chill and discharged the case, up and doing, the ninth day. The family prepared for a three weeks siege, as they knew what pneumonia was. When I told them the case would not last ten days they talked



The beautiful home of Dr. E. D. Easter down in Oklahoma

of discharging me and getting another doctor. So you see how the world runs away.

"By the way I did not mean to keep you waiting so long but had to wait on the pictures to have them finished.

"Now, if you will run down some night we will have fresh eggs and sausage 'like mother used to make' and a general good time. Wishing you the best of success I am, and are we all, yours very truly. How goes it now, Brother? Tell us about it.

E. D. EASTER.

Pond Creek, Oklahoma.

[And in THE CLINIC, *Helpful Hints* and in my daily work I answer, with records of deeds done and of things doing, "Going Some!" With all these good friends how could it be otherwise? Why is it that such a vast majority of our best therapeutists, those who are getting best results and have a correspondingly greater faith in drug therapy and themselves, are in the ranks of the dispensing doctors—those who buy what they want and use it according to the dictates of their own experience. It doesn't

need to be so, but speaking "by the book" it surely is, and—"there's a reason."—W.C.A.]

PICTURES OF FRIENDS AND THEIR HOMES

In this number of CLINICAL MEDICINE we show the pictures of several of our friends and of where they live. From some of them we print a few words, telling of themselves and their work; others prefer to keep silence—in print.

These pictures are evidently enjoyed by members of the "family," though once in a while some one writes in that we are giving too much space to them. As for ourselves, we are glad to get them. We especially enjoy pictures showing odd conditions and peculiar circumstances in medical practice. Can you, Doctor, not think of something about your own work that would make a nice picture, and which others would enjoy looking at.

Are you lodged in a log house or a tent? Have you a peculiar conveyance for getting among your patients? Is your home in the

desert or on a mountain side? Are your patients cowboys or Chinamen? Get out your kodak and send us the results.

THE DOSE RULE FOR ADMINISTERING ACONITINE

Frequent inquiries have been received from the readers of CLINICAL MEDICINE in regard to the rule outlined by me for giving alkaloidal granules of aconitine to children. We take the opportunity to explain this more fully, and at the same time discuss its relative application in connection with other alkaloidal granules. In other words, may the aconitine dose rule be applied to all other alkaloidal granules?



DR. J. M. SHALLER

The dose rule for aconitine is to dissolve one granule for each year of the child's age, with one additional granule, in twenty-four teaspoonfuls of water. For infants under one year, one granule in 24 teasoponfuls of water is the dose. Dose, one teaspoonful every fifteen minutes, every half hour, or every hour, according to the degree of fever and the sthenic condition of the patient. The higher the fever and the more sthenic the condition, the more decided is the indication for the use of aconitine. The following case led to formulating this rule:

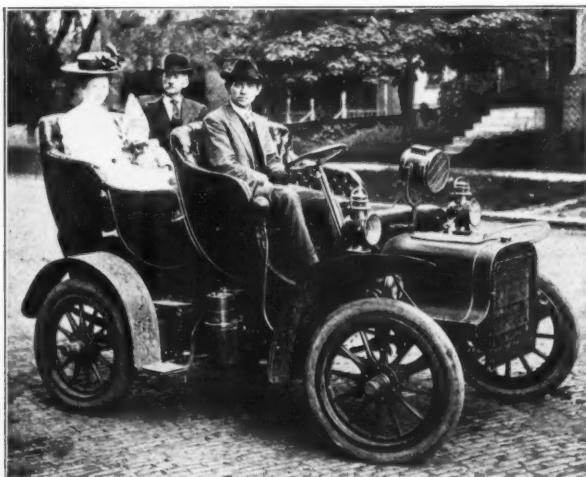
The patient was an infant, four days old, with a normal condition of the bowels; it had a temperature of 104° F. The diagnosis was not positive, but fever was probably of hepatic origin. This was among the first instances in which the writer used aconitine. The prejudices and teaching of that time (about twenty years ago) against aconitine produced a feeling of hesitancy in regard to its use and its dose, especially in regard to infants. Aconitine was indicated. It is possible to discover a correct, harmless and helpful dose of any medicine, of even a poison. In the case of this infant, one granule of aconitine (Abbott), gr. 1-134, was dissolved in twenty-four teaspoonfuls of water and one teaspoonful of this solution was given every hour until the most prominent symptoms manifest the signs of improvement.

The patient lived a number of miles from the city, and it must be confessed that there was considerable uneasiness felt as to possible evil results. This anxiety grew and magnified itself sufficiently to disturb all peace of mind. As early as possible the next morning, the patient was revisited. A sigh of relief escaped me on finding that the now-five-day infant was not dead. Several more very happy sighs followed when investigation revealed a decided improvement, which continued until recovery was complete.

This one case led to the following soliloquy: If aconitine is a good remedy to administer in acute inflammatory conditions, some safe rule should be formulated. The remedy must be made so free from danger that no one need worry about evil consequences, even when giving it to the youngest infant.

After numerous trials in many different acute febrile conditions, the rule, known as "Shaller's rule," was finally evolved. It has stood the test of twenty years, and has been used by thousands of physicians, without bad effects following. The dose seems small but the results are satisfactory, for fever is soon reduced and if given in the early stages of acute pneumonia, bronchitis or pharyngitis, the disease is frequently aborted within the first twenty-four hours of treatment.

Because of the ease with which the dose for children can be regulated, it is unfortunate that the aconitine dosage rule cannot be applied to all the alkaloidal granules.



Dr. T. C. Buxton of Decatur, Ill., coroner of Macon county

While it is safe, it is not as effective because the dose would be too small. Yet, when it is considered that aconitine is the most important of all the alkaloids used in the treatment of children's diseases, regrets are not so necessary.

Then again, with the exception of atropine, codeine, strychnine and hyoscyamine, there are very few granules in daily use that are strongly poisonous. The rule is safe even if applied to these granules, viz., hyoscyamine, 1-250 grain, atropine 1-500 grain, codeine 1-67 grain, strychnine 1-134 grain, but the dose will often need to be increased: *To effect is the only guide.*

In regard to codeine, however, a very happy and safe combination is Waugh's anodyne. Atropine is rarely needed in frequently repeated doses, and hyoscyamine is not often prescribed.

Morphine is often unsafe and codeine may well replace it in children, and in adults as well. Strychnine arsenate, grain 1-134, would be harmless used according to the aconitine rule. The other important, and very necessary and frequently used granules are emetine, calcium sulphide and calcium iodized, which are not poisonous. Digitalin and apomorphine require larger doses. Even aconitine needs to be given in larger doses to robust children with very active fevers.

Aconitine is contraindicated where the skin is pale and the pulse is feeble.

The dose according to the aconitine rule



The home of Dr. T. C. Buxton at Decatur—the nineteenth house that he has built

is safe to start with, and can easily be increased by giving the solution more frequently until improvement is manifest or until physiological symptoms are produced. Then



Dr. L. C. Oyster, Lumberport, W. Va.

the remedy may be gradually or completely withdrawn. If a remedy is indicated in serious cases, push it until some change for the better is manifest—dose enough. This can safely be done with aconitine, particularly, in the early stages of acute inflammatory or in zymotic diseases; but after forty-eight hours, however, its results are not so brilliant as when used at the outset of diseases.

If aconitine or any other medicine produces vomiting or stomachic pains, when these are not intended, the dose is too large for that patient, or not sufficiently diluted. The amount should be decreased and then diluted or entirely withdrawn.

There should be no more hesitancy in the use of the standard aconitine granule than in that of any other medicine, toxic in large

doses. Physicians should have full knowledge regarding diseases and of the harmful properties of remedies, as well as of their beneficial ones.

Confidence in one's ability, established on knowledge, together with strong, hopeful and positive assurance of the patient's recovery, conveyed to the patient and the friends, are what make for success.

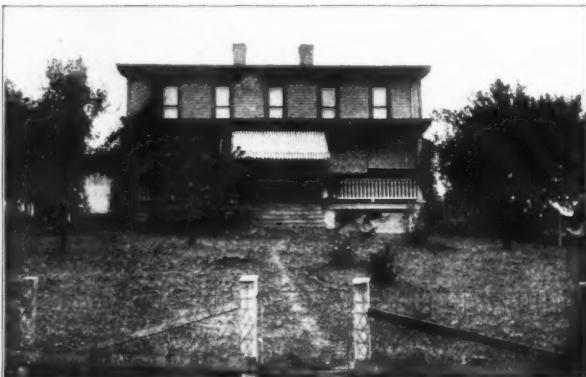
J. M. SHALLER

Denver, Col.

THE COSMIC URGE

Although I am no writer, I can not contain myself after receiving and reading *Helpful Hints for the Busy Doctor*. I am a constant reader of CLINICAL MEDICINE and think it one of the grandest medical journals published and am satisfied this new adjunct before me will also add laurels to your crown.

To begin with, I am an eclectic, an "irregular," if you please, or any other old name you wish to style me; but I have a diploma and state license just like any other doctor and am "regular" in my habits, especially of curing my pneumonia patients.



Dr. Oyster's beautiful home

And what is best of all, I've got a clear, "regular" conscience and am glad that I am a doctor and can cure sick folks, with medicine too, nihilists to the contrary notwithstanding.

If I believed what some of the authorities claim to believe as to the treatment of disease, I should go to plowing corn for bread rather than go on cheating and swindling any poor sufferer out of his hard-earned savings. I'd just let him keep them for funeral expenses.

Dr. Abbott, God bless you! To my mind you have directly and indirectly saved more lives from a premature grave than any man, dead or living. Push the good work. Bright will be your reward here below and star-decked will be your crown above.

After reading the articles of your convert, Dr. Servoss of Nevada, page 4, and of Dr. Graves, eclectic physician of Chicago, page 5 of *Helpful Hints No. 1*, and many of your editorials in previous numbers of CLINICAL MEDICINE, it seems a wonder to me that we still have men who will stand up before the public, calling themselves healers of men, and claim that pneumonia is a self-limited disease which cannot be cured or aborted by drugs rightly used and proper supplemental measures thoroughly applied. For my part I don't feel that awful dread (well known to all physicians when they come in contact with a hopeless case) that my skeptic "regular brother" does, nor should he feel it if he knows that his treatment—the very thing he was sent for to do (give medicine)—would do no good. When I go to my pneumonia patients I go with confidence, "nerve" if you please, knowing, barring accidents, that my patient is sure to get well. He does. I have a clear conscience when the man pays his bill—if he does.

I hope, Dr. Abbott, that you will continue to pour hot shot into the camp of the enemy. I never saw a man more suited for the fight in natural as well as acquired gifts than you. You're a straight hitter; "keep a hitting."

Pardon all this random talk. I'm a "country doctor;" dispense my own medicine; use Lloyd's specifics principally and get positive and definite results. I like the alkaloids and use some of them and should use more if I hadn't got used to Lloyd's line. Positive results are what I am after and they can be had from Lloyd's specifics or your alkaloids.

Doctor, whisper to your "regular" friends that pneumonia is not the only thing we "irregular" men can cure, and that with medicine, too. Thanks for *Helpful Hints*, continue to send it. It's chock full of good helpful things.

P. McDONALD.

Bolton, Ga.

[Well, what do you think of that! He said it and—I wonder if it isn't more than half true. Our good brother is an enthusiast; but nothing worth while is accomplished without enthusiasm and hard work.—ED.]

UNDIAGNOSED CASE TREATED SY- TOMATICALLY

A few days ago I was called to a neighboring ranch to see a woman who had been taken sick the previous evening. The messenger told me that the patient complained of pains in her head, back and extremities, accompanied by diarrhea. On reaching my destination I found the woman suffering severe pains in her back and extremities, and some headache.

The woman said she had felt well till 9 o'clock on the previous evening, when she experienced a slight chill followed by the pains mentioned, and that shortly after that her bowels became active, with some slight abdominal pain. The discharges were offensive. Her temperature was 102.5° F., pulse 104, and her tongue was quite heavily coated and breath foul. There was no tenderness on palpation of the abdomen and no appreciable tympanites. She was the mother of a year-old girl, still nursing, and gave a history of eating frequently and in considerable quantity in order that she might have sufficient milk for her child. The bowel passages at first carried some undigested food and there was more or less intestinal irritation.

The symptoms and history pointed toward intestinal irritation with general toxemia. Acting upon this theory, I administered calomel and podophyllin, each 1-6 grain, for six doses at half-hourly intervals; and to act as a febrifuge and to combat the infection,

one granule each of the dosimetric trinity and 1-6 grain calcium sulphide every half hour to effect, and then at less-frequent intervals to sustain such effect. To relieve the diarrhea I gave the following: Zinc sulphocarbolate, grs. 24; copper arsenite, gr. 12-250; water, ozs. 3. One teaspoonful of this mixture was given every two hours.

At 6 o'clock the temperature had dropped to 100° F. and the pulse to 90, while the general pains had subsided to some extent, although the headache was worse. There was some nervousness at this time, and to meet this symptom I administered caffeine valerianate, gr. 1-6, at half-hourly intervals, four doses being followed by sleep. The trinity and calcium sulphide were continued at hourly intervals from 6 till 10 o'clock, and then at two-hour intervals, or when the patient was awake, the rest of the night.

I saw the patient at 8 o'clock the following morning and found the temperature normal, pulse 76, and no pains. The diarrheal discharges had stopped and she was asking for food and wanted to get up. I remained at the ranch until 10:30 a.m., and at that time the conditions remained normal. I ordered the zinc and copper mixture to be continued, leaving capsules containing quinine salicylate, gr. 1-6, and strychnine arsenate, gr. 1-134, one each to be given every two hours, but the interval to be gradually extended to six hours, or three times a day. A report two days later was to the effect that the patient was up and about and feeling quite well. I suggested that the baby be weaned, that the mother confine herself to meals at regular hours and that she lessen the amount of food consumed.

This was undoubtedly a condition due to autoinfection from an overloaded bowel and the lack of proper elimination. It was also a case that demonstrated the prompt

action of active-principle therapy. It would probably have been better had I cleaned out the bowel with a saline laxative, but in my hurry to get away I overlooked the fact that I had removed my can of saline laxative from my satchel; still, the calomel and podophyllin acted very effectively in clearing out the intestine. The discharges were odorless when passed in the morning and not as frequent, and there was no abdominal pain.

In this case the symptoms were met as they appeared and with the remedies deemed proper under the circumstances, and instead of a very sick woman of the afternoon before, I left one who was laughing and



Home of Dr. A. A. Witham, Palsley, Ore.

joking and finding fault with me because I would not let her get up for breakfast.

This is one of the many cases coming under my observation in which the active principles, administered as indicated, have resulted favorably within a very short time. The primary symptoms in this case might have pointed to various specific conditions, but as this woman had not been subject to any specific infection, the case resolved itself into treating the present symptoms and withholding any specific diagnosis other than one of toxemia due probably to the causes noted above, and the results were such as to sustain such a diagnosis.

While it is probable that results might have been obtained by the use of other agents, my experience has been that the

active principles give results with greater promptness and that I have a greater assurance of their effect.

GEORGE L. SERVOSS.

Fairview, Nev.

EIGHTY-SEVEN CASES OF TYPHOID FEVER?

With great pleasure I now take the opportunity to let you know what the sulphocarbolates have done for me in treating 87 cases of typhoid fever.

We have had an epidemic of typhoid over here in Marjion during the last fall and 87 of these cases I had to treat; but many of them I was not called to see until too late so I lost three cases out of the 87. I think if I could have given them the sulphocarbolates from the start, as I did all my other cases, none would have died.

The beginning of the epidemic was in this way. There was first a case of typhoid in a house on a hill, sloping toward the water supply of the town, which was near. The dejections were thrown out in the garden and when the rain fell the water ran from that garden immediately into the natural channels of the water. Three weeks later the epidemic began. I have had among the 87 cases some very interesting ones to describe.

Male, age 16. I called to see him three days after the fever started; found temperature 38°C , evening. The patient complained of severe headache; gave monosyllabic and incomplete answers to all my questions. The tongue was characteristic. Bowels constipated. Next morning I called again to see him and found the temperature 38°F . He was lying in a state of stupor but every now and then you could hear him shrieking from groundless fears.

On the evening of the same day I was called in a hurry to see him again; found the temperature again 38°C . but he was in a state of insanity. Sometimes he threw his head against the walls, at other times sleeping, "upside down;" eyes open wide but could not

see. Three men were holding him to make him lie down in bed.

The first time I saw him I gave him 10 grains of calomel in two doses, three hours apart. After the calomel I gave a solution of saline laxative, then the sodium sulphocarbolate, 10 grains every two hours. And when I found him in that state of "*febris nervosa versatilla*." I gave him with the sulphocarbolate the tincture of veratrum viride, 2 minims every three hours. On the third day



Home of Dr. G. A. Rowe, Stockbridge, Mich.

after starting treatment he was improving, and on the eleventh day from the beginning of the fever he was feeling very comfortable, and so the case was discharged.

Among these cases, I have had four of intestinal hemorrhage. In one case over three pints of blood passed with the stools. Three of those patients were well within two weeks. The fourth did not take any medicine. Neither was she restricted to any special diet, so she wasted and died with cancrum oris at the end.

For the hemorrhage I used atropine and ergot and I am glad to say I could control the hemorrhage every time. Although genuine acute hemorrhagic nephritis is a very rare complication yet I have one such case among the 87. The acute nephritis was the predominant symptom at the start, while at a later period in the course of the fever the intestinal symptoms, the rose spots, etc., showed the disease to be typhoid fever. It was probably the result of that slight parenchy-

matous degeneration of the kidneys which occurs in typhoid as in most of the severe infectious diseases. Most likely the renal epithelium was injured by the noxious products which have been formed in the body and excreted by the kidney. The amount of urine was diminished, its color was very dark, and its specific gravity greatly increased.

In one case I noticed a marked irregularity of the pulse in the acne. I was afraid it was a grave symptom but fortunately it passed off. The patient recovered within three weeks.

Edema of the ankles and legs during convalescence I saw in four cases due to heart weakness, but it passed off in one week.

Periostitis of the tibia I have seen in one case during convalescence and in another swelling of the knee-joint, both of which are very rare complications but the cases came out all right at the end.

I see very many cases of general dropsy over here, the cause being enlarged spleen and liver due to malaria. I use for such cases quinine and anasarcan and am very glad to say the results are always satisfactory. In anasarca due to a heart lesion anasarcan always gave good results. As to nuclein I have had a good many opportunities to use it mostly hypodermatically and I can say positively that it is excellent in debility and anemia and any case of lowered vitality.

I have a case of chronic appendicitis; the patient had over twenty attacks within two years. I have used for the attacks hypodermics of morphine with a laxative and the sulphocarbonates by the mouth. The patient will not submit to an operation. Can you advise anything to prevent the recurrence of the attacks?

AMIN YUSUF.

Marjion, Beirut, Syria.

[Considering the character of Dr. Yusuf's clientele and the conditions under which they live, his results certainly seem remarkable—too good to be explained by any other hypothesis than that of correct treatment intelligently applied. The best treatment for

the case of chronic appendicitis is removal of the appendix. "Lay down the law" to that patient.—ED.]

ESTIVOAUTUMNAL FEVER

This is a continuous form of malarial fever, characterized by irregular intermissions or remissions.

The causative agent is the estivoautumnal type of malarial parasite. This parasite has no definite or fixed time of sporulation (swarming) this occurring at all hours, giving a continuous fever, the cycle of development being indefinite.

Symptoms.—At times there are chilly sensations at the onset. Usually the fever is the first symptom noticed and it is continuous. If remissions occur they are irregular; there may be an abatement of fever one morning and at the same time the next morning the temperature will be at its highest point.

The bowels are usually constipated throughout the disease. All the abdominal symptoms observed in typhoid fever are absent. The spleen is usually enlarged and tender, and the same may be said of the liver. The skin is muddy and pale yellowish. Vomiting is not uncommon. The tongue is coated, at first white, gradually getting darker. The pulse runs about 100 to the minute, temperature 102° or 103°F. The skin is dry, hot and harsh. Headache is almost always constant. Urine scanty red; high specific gravity.

Diagnosis.—Differentiate from other types of malaria by the absence of regular remissions; from typhoid and typhoid malaria by absence of all bowel lesions. A positive diagnosis may be made by observing the peculiar estivoautumnal parasite in the blood, and by the absence of other known types of parasites.

Treatment.—In the treatment of this disease the practician should ever keep in view the peculiar biology of the parasite. While quinine is the deadly enemy of all the malarial parasites, it has little or no effect so long as the parasites are imbedded in the red corpuscles; but it immediately destroys them as soon as the corpuscle breaks down and

the germs enter the blood plasma. As in this form of malaria the parasite has no fixed time to sporulate, each parasite having its own cycle of development, the rational mode of treatment is to keep the blood saturated with quinine for many days, so that each parasite may come to its death when it completes its development and enters the blood plasma.

The order of treatment would then be calomel, in 5- to 8-grain doses every two hours until the bowels are moving freely, and then quinine in 5- to 10-grain doses every three hours, continuously.

Other remedies may be used as symptoms may suggest.

If headache is severe, acentailid will relieve the pain, reduce the fever and produce a nice perspiration.

Nervous symptoms of the convulsive type call for bromides.

In weak heart the indications are for strychnine, strophanthin and digitalin.

If the skin is hot and dry and temperature high, cold water should be injected into the lower bowel in large quantities.

If the urine is high in specific gravity and scanty, demulcent drinks and diuretics should be given.

Treat all the symptoms as they arise, but at all times and under all circumstances keep up the quinine until the last parasite has been destroyed.

The fever will run a week or ten days or, in other words, it will take a week or ten days to poison all the parasites in the blood.

Intestinal antiseptics should be used from the first with the quinine, as the fever may be prolonged by autoinfection or intestinal sepsis. In case the disease turns out to be typhoid fever (the differential diagnosis without the microscope is not always easy) a good beginning will have been made. The fever usually disappears by lysis, with profuse perspiration.

Allow the patients all the cold water they want, within the bounds of reason. It will be found that if the water is not too cold it will give more relief than water as cold as ice can make it. Exceedingly cold water

often irritates the stomach, producing cramps and other unpleasant symptoms.

No solid food should be allowed during the fever or during the first week of convalescence.



Home of Dr. J. H. Lail, Anderson, Ind.

Iron and arsenic tonics are usually indicated during recovery.

WEDEN SMITH.

Jonesville, La.

[I am glad that Dr. Smith gave such proper emphasis to the importance of keeping the alimentary canal sterile, or as nearly sterile as possible. This is a point which is not borne down upon nearly as strongly as it should be. The denizens of our southern states have learned by experience that a "dose of calomel" produces a marked amelioration of symptoms, probably in part because of the antiseptic effect of this drug (the removal of the putrid mass is, of course, of main importance), but they sadly overdo the use of this purgative. The small repeated dose, associated with hepatic stimulants and followed by regulation with the saline laxative, asepsis maintained with the sulphocarbonates, acts much more nicely.

I cannot abstain from calling attention again to two salts of quinine which are not

used as much as they should be in malaria—the hydroferrocyanide and the arsenate. The former is active in much smaller doses during many of the acute forms; the latter is the preparation to be used during convalescence, when a slight maintenance of quinine action should be supplemented with arsenic.

Allusion has been made to the difficulty that sometimes occurs of differentiating this form of malaria from typhoid fever. This is where the scientific laboratory comes in. The making and sending of a blood smear to a properly equipped institution (if you are not fixed to do this work at home) is simplicity itself; and through the information gained you may get a whole flood of light which will make the hard cases easy indeed.

Also—read the articles on "Malaria" in the Postgraduate lessons this month.—ED.]

COLLECTANEA JACOBI

It is keeping well within the facts to say that few men of modern times have contributed more to the well-being of the race than Dr. Abraham Jacobi of New York. The scope of his labors, extending over a period of almost sixty years, is surprisingly disclosed in the eight volumes of his collected writings, carefully and appreciatively edited by Dr. William J. Robinson, and just issued from the press of The Critic and Guide Company, of Mount Morris Park, West, New York City. The earliest of these writings dates back almost a half century; the latest come forward to June, 1909.

"I know of no other man, either among the living or those who have passed on," says Dr. Robinson in his preface, "who in our country has had such an important influence on the development of medicine in all its phases." Dr. Robinson might easily have omitted this geographical boundary, for, as he says farther on, the influence has been wholly for the good, not only of the profession but of humanity itself. It is inspiring to contemplate a life-work so selfless and so thorough as to touch the very farthest edges of the whole domain of human life;

and the contemplation is not only inspiring, it is fascinating. These eight volumes have power to confer a liberal education upon a novice in medicine and to illuminate where education has already been conferred. No man, whether physician or layman, can read them with anything less than continuity of interest or without acquiring profit of a very high order; not because the writings are consecutive, but because they are informed fully with perfect candor, a fine and sincere sympathy, and a wisdom both profound and calm.

In and outside of the medical profession there has been a tendency to regard Dr. Jacobi as a specialist in pediatrics. This error is perhaps accounted for in the thoroughness of Dr. Jacobi's pursuit of the etiology of infantile diseases; but its injustice stands declared in this collection of his works, and his starting point is made clear. He states it with apparent unconsciousness in his remarkable chapter on "Brains, Crime and Capital Punishment," when he says that "while man experiences many things which shape his nature and fate after he is born, so there are as many while he is being born, and still more before he is born." He expressly excludes pediatrics from the list of specialties in the common acceptation of the term, but marks their importance as dealing with "the entire organism at the very period which presents the most interesting features to the student of biology and medicine," infancy and childhood being the links between conception and death, between the fetus and the adult. From this he works out as a practitioner and a teacher, through all these stages, the broadest application of medical art. He is not, nor has he ever been, a specialist, excepting in the extraordinary range of his knowledge, and his lucid power as a transmitter of that knowledge to others.

If Dr. Jacobi's life history were to be written, it would be found a history of the development of medicine during these last sixty years. That term has included an almost complete revolution, to which, in the fullest sense, no one man has contributed more aid and energy. This he has done not so much by original discovery as by the

untiring advancement of practice upon the highest and most beneficent plane. He is a diffuser of light rather than a fire-bringer, but in that office he stands supreme. As such, it would be well-nigh impossible to overestimate the benefit his work has bestowed upon the world.

His mental attitude toward new things may be described as like Bishop Berkley's, in that he views them with impartial eyes, weighs them with unfevered hands, dispassionately rejects the unworthy, and assiduously proclaims the true. Or like Paul's, who wished to try all things, and hold fast that which is good.

"My views regarding therapy," he says, "both hygienic and medical, I trust are agreeable to those who live a modern life, without superstitious belief in things because they are old, and without faith in new stuffs merely because they are new."

He believes first of all in "giving the babies a fighting chance against overdone theories and detrimental practices." To this belief, unswervingly served, who can tell how many valuable lives of grown-up men and women are owing? No man could go to his last accounting with a greater credit of merit nobly acquired, with no thought of self-seeking nor of reward beyond the knowledge that he was doing what was to be done, the duty that lay nearest him. In his chapter on "Medicine as a Career" he naively asks, "What does it mean, after all, to enjoy life? The egotism of many has often been self-sacrifice; to that class doctors are apt to belong. It is the "career of thousands." It was and is his own.

Dr. Jacobi took his first degree at the University of Bonn in 1851, his latest at Harvard in 1906. The first was in medicine, the last in laws. Between these two were others at Michigan, Columbia and Yale. He began practice in New York in 1853, a young man rich only in his endowments of mind and heart, in his courage and hope.

His earlier days were hard enough. His first fee came in November of that year, two weeks after he had taken an office in Howard street, on the East side. It was twenty-five cents. Within four years he had become

one of the founders of the German dispensary, where treatment was free; and had fairly begun his long service as a writer and teacher, getting his first lift from Dr. Stephen Smith, who accepted from him and published a series of articles, for the most part on diseases of children.

That year also (1857) he delivered his first lecture. It was to a class of the College of Physicians and Surgeons, and he frankly confesses an attack of stage-fright. Since then his professorships have been many, and he has been made a member of nearly every great medical society in the United States and Europe, the list being long enough to startle one. Europe had an earlier perception of the necessity for special research in the diseases of children. This country never had a children's clinic until Dr. Jacobi established one at the New York Medical College, in 1860, and though this terminated in 1865, when that institution passed out of existence, he followed it with another at the University Medical College, and there has never since been a lapse. It was here Dr. Jacobi first attracted attention abroad and that distinction began to find him.

Very large indeed is the debt owing by pediatrics through his efforts, by neurology and its later corollaries, psychology and psychiatry, to say nothing of therapy in general, sanitation, and surgical science itself.

His editor describes him as one of those who were first to perceive that many diseases had a social-economic basis, and that "if we wanted to do any good we had to improve the economic and sanitary condition of the people. And this he preached at every opportunity—even when his preaching was not welcome." He "perceived the physician's role as something more than that of a sanitarian—a preventer, a critic, a guide. And his guidance has always been a safe and reliable one."

He is a very young old man today, wearing his honors lightly, and is as much as ever absorbed in the love of his whole beneficent work. The "Collectanea" should make him better known to the great public for whom he has labored so devotedly and so long; and doubtless will, for no set of books ostensibly

professional ever was published having a keener interest for all sorts and conditions of intelligent readers.

GEORGE F. BUTLER.

Wilmette, Ill.

[We can add nothing to this splendid testimonial to the work of a truly great man, except the recommendation to every one of our readers to purchase the "Collectanea Jacobi." There are eight large volumes and the price is exceedingly low—only \$15 for the set. There is really more therapeutic matter of a positive, helpful character in these volumes than in any three of the ordinary textbooks on practice. There is hardly a common disease which is not considered, and in every case Dr. Jacobi's comments are illuminating. Send your orders direct to Dr. W. J. Robinson, 12 Mt. Morris Park West, New York City.—ED.]

THAT JOURNAL FOR LAYMEN

Last month I had an editorial in CLINICAL MEDICINE in which I outlined a plan for a lay journal of low price, designed to fight the doctor's battles, and combat the horde of healing fads and the encroachments of quackery. I have received a good many letters of approval (every one who wrote thought the idea a good one) and quite a large number pledged subscriptions. But thus far not enough have taken hold of the idea to warrant our going into this greatly needed undertaking. To make such a magazine a success it should start with at least 10,000 subscribers—and considering the proposed extremely low price that number *should* not be hard to obtain.

Under the circumstances I have determined to modify the plan somewhat and have joined forces with several of my most in-

timate associates to produce a little magazine to be known as *The Backbone Monthly*. The subscription price will be 50 cents a year, but there will be a reduction for a number sent in by one person. It is proposed to make it of general interest, inspirational in character, stimulating men and women to clean, optimistic, successful living. It will be openly antidotal to the "no thought." Emmanuelistic and similar literature, quietly leading the reader to trust in his medical advisers, instead of distrusting him. The plan is outlined more in detail in an editorial, this issue. If you see articles or newspaper items attacking the doctor, or vilifying him, cut them out and send them to us. We want ammunition.

I have also arranged to lend my moral support to another publication working along lines germane to those proposed for the lay journal by ourselves. This magazine is *Health and Happiness*, published by the Dickim Publishing Company, Ravenswood, Chicago. This magazine has aligned itself squarely and boldly on the side of the great organized forces which are striving to serve



Driving outfit of Dr. A. E. Lyday, Penrose, N. C.

mankind, standing with the best in medicine, in law and in the church, not against them. It proposes to tell its readers of the great achievements of the medical profession in the battle for better health, and how right living, *under the guidance of the physician*,

in rational not fad ways, can arrest disease in its incipiency and contribute to happiness. I have promised to write a series of articles for *Health and Happiness* myself, to commence in an early number and continue for several months. These will stand behind and support the doctor.

The subscription price of *Health and Happiness* is \$2.00 a year. You should have a copy for your reception-room table and should persuade your patients to subscribe. At least send for a sample copy or a three-months' trial subscription for 50 cents.

To those who have written words of support for the proposed lay journal we want to say, "Thanks!" Will you not come in and help us boost *The Backbone Monthly*?

This thing is a go! Send in your own 50 cents; add several subscriptions for friends —three for a dollar; eighteen for five; forty for ten dollars.

W. C. ABBOTT.

Chicago, Ill.

"FULL OF HELPFUL TEACHINGS"

Your journal is worth more to me than all the other medical journals I take or ever received. Every number is full of helpful teaching, while about all I get out of some of my other journals is to read of the "marriages and deaths," to see whether any more of the boys I ever knew have become victims of either state.

W. H. HARWOOD.

Chasm Falls, N. Y.

A TEXAS DOCTOR AND HIS SADDLE-BAGS

On this page we show the picture of another friend of THE CLINIC, Dr. W. T. Shelton of Pollak, Texas. He is mounted on his saddle-horse, ready to see a patient out of town. In his saddle-bag and pocket-case he carries several hundred kinds of tablets and granules.

The doctor says, that the man who undertakes to carry the old-fashioned fluids and powders often finds out after reaching

his patient that he is in need of some remedy which he just *could not* carry for lack of room, and in many instances the patient is ten or fifteen miles from a drugstore. The advantage of the doctor's being provided with



Dr. W. T. Shelton, Pollak, Texas

his own pocket-pharmacy, large enough to provide for all kinds of emergencies, seems to Dr. Shelton to be very apparent—and we agree with him.

EXPERIENCES WITH FIBROLYSIN, CHROMIUM SULPHATE AND OTHER THINGS

Dr. Shastid asks if I have had any experience with fibrolysin in optic nerve troubles. My experience with this remedy has largely been with an ointment consisting of thiosinamin, grs. 12; petrolatum (white), drs. 2. It has given me good results in opacities of the cornea. Thiosinamin and fibrolysin are practically the same thing.

I was recently treating a woman for stricture of the rectum. I gave her about thirty injections of fibrolysin into the gluteal muscles. The stricture seemed to diminish. She had been obliged before treatment to spend about 45 minutes at stool each time,

suffering terribly with tenesmus. This trouble nearly disappeared; but she left here and had to stop treatment. She was nearly blind in her left eye before the fibrolysin treatment, and declared that her sight was improving the last time I saw her. She never had corneal opacity.

As to chromium sulphate, it is the most wonderful medicine ever discovered. I have treated successfully cases of marked exophthalmic goiter, neurasthenia, many, many cases of migraine, and one case of locomotor ataxia, the last with marvelous results. The tabetic patient could not stand with his eyes closed a half minute, and after the first few days he wouldn't fall if he stood that way any length of time. He can now walk across the yard, turn around quickly and come back, all without special care, a thing that would have been impossible before taking the chromium sulphate. The doctor should get *The Monthly Cyclopedia and Medical Bulletin* for September, 1908, and read the article carefully. It reads like a fairy story; no one will believe one-hundredth part of it until he has tried it.

The chromium sulphate is nontoxic. I give it as Dr. Kolipinski directs, from 4 to 8 grains after meals and at bedtime. It is very hygroscopic and should always be kept in glass bottles even when put up in tablets or capsules. I tried it in one case of a poor, foolish young man, imbecile from alcohol. His mother told me that he seemed to get some better; but I have lost track of the case. They live some distance from here so it is difficult to keep the boy under observation.

Dr. Bennett, page 1227 (1909), CLINICAL MEDICINE, reports a case of "bladder and urinary trouble" treated unsuccessfully with chromium sulphate. Dr. Kolipinski does not recommend it for such cases. He does recommend it in hypertrophy of prostate and says, if cystitis exists to give sandalwood oil. Dr. Kolipinski's list of diseases is certainly long enough, comprising as it does cirrhosis of the female breast, castration, menopause, functional impotency in men, chronic alcoholism, nervous vomiting, vomiting of pregnancy, neurasthenia, locomotor ataxia, exophthalmic goiter, the migraines, and hyper-

trophy of the prostate. From my own experience, so far, I believe that Dr. Kolipinski's claims are not exaggerated.

At present I am treating a case of mitral stenosis with injections of fibrolysin. Stethoscopic examination does not show any improvement as yet, but the patient says she feels better. She has had only seven injections. After giving her thirty or forty I shall report results.

One thing should be kept carefully in mind when thinking of fibrolysin treatment. If the patient has had an abdominal section the remedy should not be used, as it will dissolve the fibrous tissue in the wound and allow the abdomen to open. This also applies, of course, to any other operation where a cure depends on the permanency of fibrous tissue.

A "wrinkle" worth while is to touch the point of entrance of the needle with a drop of carbolic acid both before and after the injection. The former serves to anesthetize and disinfect and the latter to close the hole immediately and prevent entrance of dust; together they leave a brown spot which lasts several days and shows where the injections have been made.

A remedy which I believe is not used nearly as much as it deserves to be is terpinol. It is very useful in chronic bronchitis, especially in people of advanced age. It is best given in capsules made in the factory. Three or four of these capsules should be given each day. It is one of the few remedies from which these chronic patients get so much benefit that they will come back for more.

C. O. RICE.

Sabinas, Coah., Mex.

[Now that's the kind of letter I like to get enthusiastic, practical, helpful. Thiosinamin is a remarkable remedy. Not every one knows that it is made from oil of mustard. Fibrolysin is a solution of thiosinamin and sodium salicylate. We have an exhaustive article on this interesting subject, written by Dr. Waugh, which we hope to publish next month.

The chromium sulphate report certainly strengthens Dr. Kolipinski's claims. A few

others have also written about it, most of them favorably, but we should have a larger "vote" before making a decision. Why cannot we hear from a goodly "bunch" of the family?

Terpinol must not be confused with terpineol, an artificial perfume of lilac odor. Terpinol is a mixture of terebinthine derivatives, being produced by the action of dilute



Home of Dr. J. Knotz, Cologne, Minn.

mineral acids upon terpin hydrate and distilling. It is considered a bronchial stimulant, diuretic and antiseptic, given in profuse expectoration of phthisis and in all bronchial affections. The dose is given as 2 to 5 minims. Terpinol is also used as a cheap perfume for soaps and the like.—ED.]

BRONCHITIS—GRIP: ONE HUNDRED SHORT ARTICLES WANTED

Next month we shall be in the middle of the winter. We should, therefore, be discussing the winter ailments. We have some "stuff" on hand and we want a good deal more. There's no trouble in getting long articles—the difficulty is to get the short, crisp and practical kind, containing only alkaloids of thought without vehicle or menstruum.

Brother Doctor, we appeal to you for help. Please do not wait till tomorrow or next week; sit down and write us a personal man-to-man letter, telling just the methods that you use and that are bringing you success.

Or, if the methods are *not* proving as satisfactory as you think they should, tell us about them, and we'll help and get the "family" to help too.

The subjects that appeal to us as peculiarly timely are—

Grip.

Cold in the head—coryza.

Cold on the chest—acute bronchitis.

Chronic cough—chronic bronchitis, bronchorrhea, winter cough, etc.

Muscular rheumatism, including lumbago, pleurodynia, etc.

Sciatica.

There! Surely among that list there must be something that will suit you exactly. Give it to us straight—and don't forget that we are interested in *modern* therapeutics, and that work with alkaloidal and active-principle measures will be specially welcome. But if it's therapy you send in, *real* therapy, it will be appreciated.

Now—I count on this little appeal to bring us in 100 articles, letters—what you will.

BARBER'S ITCH

I was much interested in D. G. Persson's letter on page 1259 of Nov. number on "Aseptic Barber's Shops." About two months ago a local barber who prides himself on his asepsis came to me with a suspicious looking rash on both hands. He had shaved a customer affected with "barber's itch," but gave the matter no thought, because the customer told him it would not "catch in the hands." But "catch" it did.

In about a week he was very much better, although some pustules were still freely exuding serum. Contrary to my orders he then shaved a man and the latter promptly became infected. I only learned of this later, after I had been treating the second patient some days. I heard, also, of another infection taking place from the same source. Now, is there *no* safeguard against this filthy disease? Why shouldn't the boards of health

take up the matter? It certainly is an important one.

Personally, I always shave myself, but for hair-cuts I am of course dependent on the barbers. So is my small boy. So are countless thousands.

Very often "itch" can be aborted by frequent mopping off of the infected area with creolin solution, 2 in 100, or even stronger, if the patient can bear it. Let it dry on and then apply resorcin ointment. This plan has given me good results if employed early.

What do doctors think on this subject anyway?

C. D. MARTINETTI.

Orange, N. J.

[This is an interesting subject. Doubtless many of our readers have had experience with the treatment of barber's itch, and can offer suggestions. Come on.—ED.]

WHOOPING-COUGH

There is an epidemic of whooping-cough now going on and a great variety of remedies are being used, with, however, little curative effect. The best and most reliable remedy that I have used is this mixture: Potassium bromide, 2 drams; fluid extract of belladonna root, 20 minimis; whisky or diluted alcohol, 4 ounces. For a 5- or 6-year-old child the dose is about one teaspoonful every four hours through the day up to bedtime. The dose should be increased until the pupils are just a little dilated. This treatment is begun after the acute stage (tenth day). Also calx iodata for the catarrh. This is about all the drugs used or required to abort or control the cough in four to eight days. I have never found any other treatment very reliable in this disease.

I. N. MAYERS.

Speedwell, Tenn.

[Why belladonna? The action of the galenic is that of one of its chief alkaloids, atropine or hyoscyamine; therefore why not give the active principle and be certain of the dosage, certain of the purity of the remedy administered, certain of the re-

sult obtained? Atropine is undoubtedly one of the most valuable remedies in this disease. As a sedative we prefer to associate it with monobromated camphor, which does not stupefy the patient and upset his digestion as do the bromides. It's a mistake to give whisky to the babies; they don't need it, and it may do infinite harm. The doctor who overlooks calcium sulphide in whooping-cough is missing something good. This is a remedy which should be used in every case—and pushed!—ED.]

LOCAL USE OF MAGNESIUM SULPHATE FOR THE RELIEF OF PAIN

Following we print a short paper read by Dr. Solomon Solis Cohen at the last meeting of the American Medical Association and printed in the Association *Journal* for Dec. 4. The discussion is also reprinted. The facts, as given, are not new to our readers, but they will serve to emphasize more strongly the suggestions which have been made repeatedly in these columns, for a number of years, as to the analgetic properties of magnesium sulphate as a local application. Evidently some of the ideas promulgated through these pages are beginning to attract the attention of eminent members of the "faculty."

In certain cases of cutaneous inflammation, arthritis, etc., in which I was led to make observations on the effects of external applications of magnesium sulphate, certain deep-seated pains independent of the particular affection of which a patient complained, apparently disappeared in sequence—I do not say in consequence, but in sequence—of the application. In order to test whether or not this was a psychic phenomenon, other applications were made—simple saline solution, distilled water, magnesium chloride, sodium sulphate, etc.; and, while any moist dressing in these particular cases (I am not referring now to cases in general) seemed to diminish the pain somewhat, none of them had the same decided effect as the magnesium sulphate. The nearest in such power was sodium sulphate.

As to classes of cases: One was an aneurism. A man suffering from thoracic aneurism with projection of the chest-wall had some slight cutaneous irritation over the mass—I have forgotten its cause. Application of magnesium sulphate solution was made. The relief to his deep pain was so great that he asked to have the dressing repeated after the irritation had subsided. This apparently was a psychic reaction; yet when the application was changed to sodium chloride solution without the

man's knowledge it failed to produce the same effect. But magnesium citrate likewise failed. The effect was not lasting and the application had to be repeated from time to time, and finally in this particular instance of aneurism it failed to have any further effect. Other cases in which this apparently reflex analgesia was observed were cases of gastric ulcer, gastric carcinoma, lymphatic leukemia, acute pericarditis, sciatica, headache of unknown origin, chronic pleurisy. In many instances it failed completely. To determine whether in any case there was any local anesthesia produced, tactile sense, pain sense, thermal sense, etc., were tested in normal persons, in the patients relieved by magnesium sulphate, and in patients not relieved by it. In no instance was any effect of any kind on the cutaneous sensation detected, whether the examinations were made within ten minutes or after thirty minutes to an hour. I present this merely as a curiosity of observation. The measure may be useful at times when one does not care to give morphine in cases of deep-seated pains, acute or chronic.

The problem is complicated and the method of observation is inexact, so that I am not now prepared to say that there was a definite chemical or pharmacologic action of the magnesium sulphate in these cases. The matter seems, however, to be worth proving further.

ABSTRACT OF DISCUSSION

Dr. Reid Hunt, Washington, D. C.: Dr. S. J. Meltzer, New York, did some experiments on animals in such a way that the psychic element could be completely eliminated. The remarkable results shown seem to be good reasons for believing that magnesium sulphate will relieve pain materially. Dr. Meltzer anesthetized a rabbit, and while the animal was deeply anesthetized placed both ears in hot water for a very short time and then the right ear was treated with a strong solution of magnesium sulphate and the left ear with an isotonic solution of some other salt. Some little time afterward the ear treated with magnesium sulphate was upright and seemed normal, the ear treated with salts of the same concentration was drooping and evidently not on the road to recovery. Later, the ear treated with magnesium sulphate was practically normal, only a few ulcers being present; the other ear, treated with other salts, had largely sloughed away. Dr. Meltzer suggested treating burns with magnesium sulphate. It has been used to some extent for burns of the first and second degree and has given much relief and evidently aided greatly in healing.

Dr. Theodore Potter, Indianapolis: Do the members of this Section use the solution of magnesium sulphate in erysipelas? It is coming to be talked about recently and in some localities is rapidly supplanting the application of various other medicaments like ichthyl. We run from one thing to another and at present we run toward sulphate of magnesium. I have used it in a few cases of erysipelas; perhaps it has done as much good as cold water, which thus far seems to do as much good as anything. It appears that this drug will supplant other things rapidly, such as ichthyl, once widely used, and in which the profession has largely lost confidence.

Dr. Solomon Solis Cohen, Philadelphia: I am, fortunately, or unfortunately, of that mental temperament which cannot always make an unqualified

statement. I remember very well that my honored teacher of therapeutics used to be very positive concerning each particular drug that he was lecturing about, that it would "cure" many and various affections. All I am able to say of this or any drug is that it is useful under certain limitations. Magnesium sulphate, applied locally, in certain cases of erysipelas, is useful. But there are cases of intense, rapidly spreading and eryspelatous inflammation, with toxic systemic symptoms, in which I should be very reluctant to depend on the external application of epsom salt as being all that medical science could do for the relief of the patient. In mild cases of strictly localized erysipelas, without much toxemia, a dressing of cold, saturated magnesium-sulphate solution, properly applied, seems to be about as useful as, and perhaps a little more useful than, anything else that I have used. It is not so dirty as ichthyl and seems to afford the patient a great deal of comfort. It relieves the burning especially. I don't know that it checks the spread of the local infection, but it does relieve, to a marked degree, the local distress. It may confidently be used for such purposes, but it should not be used for the things that it will not do. I may add that I sometimes say to my students, and I think it may be said to physicians, while an elephant cannot climb a tree, yet an elephant is a very useful animal for heavy draught purposes. So with our drugs. Magnesium sulphate in the case of erysipelas may climb a tree; but it is not to be depended on for heavy draught.

[The credit for the discovery of this remarkable action of magnesium sulphate undoubtedly belongs to Dr. W. H. Burgess of Avondale, Tennessee. His ideas have been repeatedly given publicity through the columns of CLINICAL MEDICINE, and have been presented at length in his little book. Is it because Dr. Burgess is an "obscure" country doctor, without recognized professional standing, that his contributions on this subject receive no recognition. If he had written in German, and to the *Muenchener Medizinische Wochenschrift*, there would have been no such oversight.

We have had frequent occasion to employ the magnesium sulphate locally for the relief of pain, and in our query department the expedient has been recommended again and again. Try it, Doctor, and report.—ED.]

LOOK OUT!

We have good reason to believe that there will be, this winter, a revival of the efforts to get national and state legislation against the doctor's dispensing his own medicine. It is probable that a bill or bills will be in-

troduced in Congress prohibiting the sending of the socalled habit-forming drugs through the mails. While it is of course desirable to prevent laymen from getting hold of such drugs as morphine and cocaine, or individuals from catering to the vicious habits or misfortunes of others for their own profit, it is just as certain that no such bill which fails to exempt the physician from its provisions should be permitted to become a law. The doctor is justly entitled to purchase his remedies in the best market, where he can get the things that he requires, and at prices that are satisfactory. Any legislation that interferes with that right is class legislation of the grossest character.

We have also learned that a certain drug journal is preparing to create popular sentiment against the dispensing doctor by furnishing defamatory pamphlets for free distribution to the laity. Report to us every effort of this description.

We warn our readers to be on the lookout for all movements of this kind. We shall fight this pernicious movement, and so will every other medical journal which really has the interests of the rank and file of the medical profession at heart. We call upon our readers to keep us informed, sending full data, and to be personally active when anything of this kind crops out.

HAVE YOU CASES OF TUBERCULOSIS OR CANCER?

Some of our friends are doing interesting experimental work with these diseases and are having a degree of success in their treatment that is really remarkable. In order to determine, however, the exact field of usefulness of the method they wish to try it on a large number of cases. If you have any such patients, suffering from tuberculosis or carcinoma, and they are able to pay for ordinary hospital care, to cost from \$7 to \$10 a week, our friends will give them every attention, and entirely without professional charge, unless of course they are able to, and you think they should, pay reasonable fees.

The method of treatment is one that, if it does no good, can do no harm. About eighty cases of tuberculosis (most of them far-advanced) have been treated and there has been improvement in nearly all and apparent cure in a very large proportion. Third-stage cases are accepted, and advanced malignant disease, the only restriction being that no patients should be sent in for treatment who can not take the railroad trip safely and who are so nearly gone that they are not likely to survive for at least six weeks. Send in advanced cases if you will, but not those *in articulo mortis*.

Write the editor of CLINICAL MEDICINE and he will put you in touch with our friends.

PELLAGRA AND HOOKWORM

Every medical journal in the land is glean-ing information about pellagra to supply the eager demands of its readers for such material. We have supplied the best we could get. We will do still better now, by referring readers to the extremely valuable pamphlet on this disease issued by the Illinois State Board of Health. This monograph contains all of value we have seen in any publication and a great deal more not obtainable elsewhere. It is too valuable to abstract, and we believe we consider your interests best by advising you to write to the Secretary, Dr. J. A. Egan, Springfield, Ill., for a copy. We add our congratulations to Dr. Egan for the work he has issued, to whose completeness and value we take pleasure in testifying.

I wonder if we can not have some reports of our own on this disease and on hookworm for publication next month. Hundreds of our readers, especially those living in the South, must be coming in contact with one or both. We should have no difficulty in getting a number of practical papers, telling just how these cases look to the physician who attends them, and the methods of treatment he has used with the largest degree of success. We also want photographs, a bunch of them.

Please consider this a personal invitation to contribute and come on with your "stuff."



CLINICAL MEDICINE POST-GRADUATE SCHOOL OF THERAPEUTICS

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PART III.—LESSON FOUR

MALARIA

TREATMENT OF MALARIAL FEVER

Prophylaxis.—Malaria may be much restricted by thorough drainage. Planting of trees whose roots dry the soil is an inexpensive and desirable measure; all stagnant pools of water should be covered with crude coal-oil to prevent the propagation of mosquitoes. When necessarily exposed in a malarial region it is important to avoid going outdoors after sundown or before seven or eight in the morning, and to avoid unnecessary fatigue, overeating or drinking, and constipation. One is far more apt to acquire malaria by fasting or when tired than when the stomach is full and the person in good condition.

All sleeping apartments should be above the ground floor, the higher up the better. In malarial districts it is wise to take small doses of arsenate of quinine two or three times a day as a prophylactic. This drug should always be taken during the active malarial season, otherwise the system becomes too accustomed to it. Drinking of lemonade and a moderate amount of coffee act as prophylactics. Mosquito-nets should be used to keep these insects out of the house. The body should be covered up during sleep

and every precaution that circumstances permit (e. g. fires, smoke, etc.) should be employed to keep mosquitoes away.

As the subjects of malarial infection are dangerous to their companions they should therefore be avoided, or if this is impracticable, be compelled to sleep under mosquito-nets. This is more applicable in communities where malaria is prevalent. Houses should be placed, if possible, on high and dry situations, a clay soil (because retarding drainage) being avoided. In the neighborhood of houses the felting of natural grass should, whenever possible, be preserved, but if it be disturbed, the exposed soil should immediately be covered with clay or cement.

Manson says it is unwise to have flower beds or vegetable gardens near bedroom windows, or to allow water from bathrooms or cook-houses to flow over the ground in the vicinity of the house, or to keep water unchanged in tubs or water-butts for mosquitoes to breed in. Ponds should be stocked with fish, these tending to keep down mosquitoes by feeding on their larvæ. The neighborhood of swamps should be avoided.

Diet in Malaria.—Food in malarial fevers ought to be light and principally fluid; effervescent mixtures often help to clean the

tongue and settle the stomach. Lemon decoction, made by boiling for half an hour a sliced lemon, including skin and seeds, in a pint and a half of water, straining, diluting and sweetening, is much relished in malarial fever and may, with advantage, be taken systematically by all patients; fresh lemonade, fresh lime juice, weak cold tea and fruit ice-waters are all much appreciated by these patients. During convalescence the quality of the food should gradually be improved and if necessary supplemented by mild alcoholic beverages.

Treatment of Malaria.—The treatment of simple types of malarial fever comprises, first, that of the paroxysms; second, the interval, the latter including the prevention of return of the paroxysms, the relief of congested viscera, and the improvement of the blood and the treatment of malarial cachexia.

When the chill occurs with the onset of the paroxysms the patient should get to bed and be warmly covered. If there is hyperpyrexia, free sweating may be advanced by giving a hypodermic of pilocarpine, 1-10 to 1-6 grain. If there is extreme debility, it is better, however, not to give this drug, owing to the danger of collapse and pulmonary hyperemia. Next a hypodermic of atropine, gr. 1-134 to 1-67, to which brucine, gr. 1-20 to 1-10, or strychnine, gr. 1-30 to 1-20 may be added if there is much debility. This combination is especially indicated in the algid form, where intense cutaneous vaso-motor spasm is to be quickly unlocked and failing vitality revived. It will also be found of value in hemoglobinuria, in which strychnine has given the best results of any remedy. Full doses, however, are essential.

Along with this hypodermic medication it is well to give 15 or 20 minimis of chloroform in hot lemonade or a hot drink to which some capsicum is added. Indeed, the fluid itself should not only be hot but should be hot to the taste. Hot-water-bottles may be placed to the feet. This treatment will shorten the chill and lessen its severity. As soon as the chill has subsided, or if you are called to see a patient who is in other stages, immediately give calomel and podophyllin, 1-4 to 1-2 grain every half hour until 1 or 2

grains of calomel have been taken, this to be followed in two hours by a saline laxative. By means of the latter we should also subsequently keep the bowels open during the entire course of this disease. Then at once give the dosimetric or defervescent compound, one granule every fifteen or thirty minutes, not waiting for the bowels to move. If the congested condition of the circulation is very great, we aid the action of the compound by administering atropine with it. As soon as the bowels move administer quinine in some form.

In the remittent form it is well, as in all other forms, thoroughly to clean out the bowels first. Then commence quinine at 8 o'clock in the evening, giving 5 grains with some capsicum every hour for five doses, then every four to six hours. Reduce the hyperpyrexia by the means of baths, using ice when necessary.

Quinine furnishes the best illustration known to therapeutics of a true specific remedy. When quinine fails to relieve a malarial affection it is because the drug is not properly given or the alimentary canal is unfitted to absorb it. When the tongue is heavily coated and the bowels are constipated quinine may not act until after the intestines have been cleaned out. Reports from numerous American physicians indicate the absolute necessity of keeping the alimentary canal clear and aseptic, and elimination free. To neglect the liver is simply medical homicide, says an old physician from the Carolina rice fields.

No better drugs for the purpose of cleaning out the intestinal canal and stimulating the liver can be used than calomel, podophyllin, bile salts and emetine. Emetine, especially, is a very valuable stimulant. Intestinal antisepsics should invariably follow the laxatives. These two things, laxatives and intestinal antisepsics, are almost as essential as quinine in the treatment of malarial fever.

Quinine may be given at stated intervals without regard to the paroxysm, and in mild cases this method may serve; still, in most instances it is better to give an initial large dose four or five hours before the paroxysm is expected. The milder tertian agues yield

to doses of 10 to 15 grains, but severer types of malaria are better controlled by 30 to 40 grains. As a rule 15 grains may be prescribed five hours before the paroxysms and the dose repeated in an hour. Succeeding paroxysms may be met with 15 grains, while subsequently 5 to 10 grains should be given for four or five days, when the dose may still further be decreased to 5 grains twice a day and then maintained at this rate for a week or two until the spleen has regained its normal size and the disease is fully under control.

Manson thinks it best, in the *simple intermittent fever*, to give the quinine at the commencement of the sweating stage, but in the serious remittent and in the grave forms to give it at once.

Quinine does not render the blood immune against further infection, it only acts as a direct poison to the infective organism when present. Of the various salts of quinine that have been proposed for use in this disease the sulphate seems to be the most popular, although if the arsenate of quinine were given more general trial it would become, I believe, a greater favorite than the sulphate.

Large doses, I am inclined to think, are not needed in ordinary cases, the main point being to assure the absorption of the drug; and it is doubtful whether 30 or 40 grains of quinine given at one dose are all absorbed. Much, I think, depends upon its mode of administration and it is probable that much smaller doses will prove effective when given in connection with a saline effervescent, especially after the bowels have previously been opened up. It should, of course, be given when the stomach is empty. Large doses of quinine are not only unnecessary but they are injurious in many instances.

Quinine per Rectum.—Quinine is sometimes given by the rectum when conditions prohibit its being taken by the mouth, or when on account of obstinate vomiting it cannot be retained in the stomach. In this case the rectum must first be washed out with sterilized water. Dissolve 10 to 20 grains of dihydrochloride of quinine in a little

warm water and mix with 2 or 3 ounces of thin starch mucilage, add a few drops of tincture of opium, and inject this dose through a tube as high up the colon as possible. If care is not taken tenesmus may be provoked and a portion of the quinine enema ejected.

Hypodermic Injections offer a very serviceable method of quickly introducing quinine into the system, this mode being especially applicable in the pernicious form when the patient may be unconscious and unable to swallow. A certain amount of pain accompanies the introduction of quinine in this way, but no other risks are incurred, provided strict asepsis is observed.

One of the best forms of quinine for hypodermic administration is considered to be the quinine and urea hydrochloride, also known as carbamidated quinine dihydrochloride. This salt contains 70 percent of quinine and is extremely water-soluble, in fact a 50-percent aqueous solution can be made. The hypodermic dose is given at from 1 1-2 to 8 grains. It is claimed not to give rise to sores, and little pain.

The following formula has also been recommended for this purpose: Dihydrochloride of quinine, 20 grains; distilled water, 15 minims. This fills an ordinary syringe and is a full dose of 20 grains; however, much less than this amount is effectual in many cases if given subcutaneously. Solutions of the lactate and of the hydrobromide of quinine (soluble in 40 parts of water) also are used for hypodermic injections. Yeo says that we should probably avoid much of the pain the foregoing solution causes by using a syringe holding half an ounce, diluting the solution to that extent with warm sterile salt solution, and injecting this very slowly and deeply into the buttocks, the lumbar region, between the scapulas, or in the hypochondriac regions, either of which is suitable.

The solution should be sterilized by boiling; we should see to it that the syringe and needle is aseptic and the surface of the skin cleansed in the usual way.

Intravenous Injection of Quinine has been advocated in pernicious forms when

other channels of absorption cannot be relied on. For this purpose acid solutions may not be used. The following is a good formula: Quinine hydrochloride (not the acid dihydrochloride), 15 grains; sodium chloride, 12 grains; distilled water, 2 1-2 drams. This solution must be boiled and filtered before using, and while warm is quite clear. A bandage is applied above the elbow so as to distend the veins of the forearm, the small vein on the inner side of the forearm, is selected and the needle of the hypodermic syringe is introduced from below upward. The syringe is made to hold 75 minimis (representing 7 1-2 grains of quinine), and the instrument is rendered perfectly aseptic before using. The bandage is then removed from the forearm and the fluid slowly injected into the vein. The occurrence of a small tumor at the seat of puncture would indicate that the needle had missed the vein. The puncture-wound is covered with collodion. The symptoms of quinine intoxication soon appear but do not last more than ten or fifteen minutes.

In giving quinine by the mouth, I think it is best to give it in divided doses, so that there will not be a moment in which the blood is not so charged with it as to render it impossible for the parasites to mature. No matter how large the single dose, it will act only on those microbes that are in an unprotected stage of development while the rest will remain to multiply.

Excepting possibly in the severer attacks, it seems likely that the arsenate of quinine in doses of a grain a day is equal to 15 grains a day of the sulphate. If so, the smaller dose and freedom from objectionable features of the big doses are worth considering; but in the dangerous fevers of the tropics always give quinine to effect.

Ordinary Malarial Fever.—It will be found in the ordinary cases of malarial fever that you can get best results by first giving calomel and podophyllin, followed by a saline laxative, then by the dosimetric or defervescent combination, and after this quinine arsenate, 1 centigram; berberine, 1 centigram; amorphous hyoscyamine, 1-4 milligram, one dose every two hours. This

treatment may be continued for a week. The second week drop the hyoscyamine, continuing the quinine arsenate and berberine for another week. At this time your patient will feel pretty well, but the medicines should be continued for at least another week, quinine arsenate and berberine, one dosimetric granule of each three times a day. After this, give the triple arsenates with nuclein, 2 to 4 of the tablets after meals for a month or six weeks, and you will have results never obtained before by mere large doses of quinine.

Precautions in Quinine Medication.—Certain precautions in using quinine are demanded which it may be well to mention. Care should be exercised in giving quinine to pregnant women, for sometimes it undoubtedly causes miscarriage. Manson says, however, that the fact of pregnancy must not debar the use of this drug altogether, only that in such circumstances it must be employed in the smallest doses likely to be effective, say, 3 grains repeated every eight hours for a few days. A pregnant woman will run more risk and ill health from ague-fits than she will from a reasonable dose of quinine. In these cases, then, it should be much better to give the arsenate of quinine, or the combination recommended above, than the large doses of the sulphate. In malarial countries it is a wise precaution to give a few 5-grain doses of quinine during labor or soon after. The puerperal state seems to have the effect, as any other shock or physiologic strain might have, of wakening up the slumbering plasmodium malariae. A dose or two of quinine under these circumstances will do no harm and may, by choking off a threatening fever, avert suffering and anxiety, not to mention pain.

Calcium Sulphide has, during the last few years, been employed by many physicians as a remedy for various infectious maladies. Given in doses of 5 grains a day saturation is produced in a few hours, as can be noted by the exhalation of the characteristic odor of the breath and the skin. This saturation may be maintained for weeks, the medication being harmless when administered to adults in doses of even 50 grains

a day. If the doses are too large nausea may ensue, and so it is best to give it in doses of 1-6 to 1-2 grain, repeating every half hour, for while thus nausea is avoided, saturation is secured with the smallest possible amount of the drug. When the body is thus saturated with the sulphide, in most instances mosquitoes or any other insect can not be induced to attack such person.

One thing is essential: the sulphide must be of the very best quality, full U. S. P. strength, containing at least 60 percent of true calcium sulphide. This drug is quite difficult to keep unchanged since it goes on decomposing apace, and unless fully up to the pharmacopeial standard should not be depended upon for medicinal effect. The ordinary article found on the market in powder and tablet form ranges in sulphide-strength from the merest trace upward, the U. S. P. shelf being found decidedly uncrowded.

Other Useful Drugs.—There are, in addition to those named, certain other drugs that are employed with more or less success in the treatment of malaria, some of which may be enumerated.

Methylene-blue is mentioned by Manson, who gives it in doses up to 3 grains, pushed until the urine becomes changed or signs of kidney irritation appear. Anarcotin was at one time (during a quinine shortage), extensively employed in India. The dose is 1 to 3 grains. Phenocoll hydrochloride has been administered, two or three hours before the expected paroxysms, with advantage and it is said to have succeeded in cases where quinine failed.

The tannic-acid treatment may also be tried in cases where quinine can not be taken. Capsicum, 1 grain, with 5 grains of quinine is said to succeed where quinine alone fails. The arsenate of quinine with berberine, emetine, or capsicin, will answer better than 5 to 10 grains of quinine sulphate alone. Euquinine, lately introduced, is said to have all the virtues of quinine, without its bitter taste.

In *bilious remittent fever* there often is vomiting. To allay this, mustard poultices may be applied to the epigastrium, while

small hypodermics of morphine, sips of very hot water, effervescent mixtures, champagne, small doses of emetine, and all the remedies that aid in allaying nausea and vomiting are indicated. However, if in spite of treatment the vomiting persists, and it is impossible to give quinine by the mouth, the rectum should be cleared with warm water and an emena containing 10 to 30 grains of quinine disulphate, dissolved in 3 ounces of water, should be given. As soon as the stomach has quieted down, the remedy may be continued as long as necessary by the mouth.

Hyperpyrexia must be promptly met by prolonged warm baths, by a cold bath, rectal injections of ice water, ice-bags to the head, etc. At the same time quinine must be injected hypodermically or given in full doses and repeated every three hours until 30 or 40 grains have been administered.

If a patient suffering from malaria has dysenteric attacks, they may be controlled by intestinal antiseptics, usually alone, or else combined with morphine. If the kidneys are congested, mild salines such as potassium citrate or the bitartrate may be given with carbonic-acid water.

Comatose Types of Pernicious Ague **Require**, in addition to the hypodermic administration of quinine, active stimulation, to tide the patient over until the quinine shall have time to act. Morphine in full doses is useful, morphine with atropine, in whisky or brandy, may be given in addition to ammonia, camphor or chloroform, as a cardiac stimulant. Strychnine should be given hypodermically. If the surface of the body is cold from collapse, hot-water-bottles must be applied.

It seems needless to add that conserving the patient's vital forces and strength by proper stimulation, nourishment and nursing is of as great importance in malarial as in other fevers. In few if any other diseases there is a need for blood building as urgent and imperative as in the various forms of malarial fever. Whenever it is possible to combine hematics and constructive treatment with antiparasitic medication it should be given in the acute cases of brief duration. There-

fore, we think, that the arsenate of quinine acts better than the sulphate.

After-treatment of Malarial Fever.—The bowels should be kept open by laxative salines. The triple arsenates with nuclein should be given three times a day. Baths, with friction, and exercise in the best air obtainable should also be advised. For a few weeks, especially to patients who reside in a malarial country, small or moderate tonic doses of arsenate of quinine should be given. Outdoor air, moderate exercise, and regular habits are of importance. Massage is to be recommended and may be gently applied over the enlarged spleen. Mercurial ointment sometimes appears of service when rubbed in over the spleen while ergotin is recommended by some clinicians to reduce that organ. Patients suffering from malarial cachexia always improve faster if they can remove for a few months to a nonmalarial district.

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MALARIA: ITS TREATMENT

Modern investigation powerfully sustains the clinically derived conclusions of our fathers, that the bowels must be unloaded and the liver stimulated as the first indications in all forms of malarial disease where sufficient time is afforded for this purpose. We therefore administer calomel and podophyllin, 1-6 grain each, every half hour for six doses, follow with a full dose of a laxative saline, and repeat this as often as may be found advisable—but we do not quit until we *know* that the bowel is absolutely empty. Then we go a step beyond our forbears by disinfecting the intestine, using a sufficiency of one or other of the sulphocarbonates, of calcium, sodium or zinc; and of late we have been adding a milligram, every hour, of the sulphocarbonate of copper. The result is another of those recurring surprises as we note what a large share of the "malarial" symptoms is due to fecal toxemia.

Why not? We are now informed that the utility of arsenic in this affection is due to its power of rendering the red blood-cor-

puses so unpleasant to the malarial plasmodia that the latter leave these cells alone. Is there anything quite as likely to lessen the resisting power of these corpuscles as a fecal element in the blood-serum surrounding them? Or anything so apt to render this serum a favorable culture-fluid for the plasmodia?

Now as to quinine. Is it better to infiltrate this salt gradually into the blood by administering a little dose every half or quarter hour, or to give it in one dose so as to be all available at the time when the new brood of parasites is hatched and ready to attack the red corpuscles, but in reality to be met and jugulated by our germicide while these noxious pests are as yet too young and inexperienced to have acquired resisting powers? If the attacks are frankly periodic (quotidian, tertian, quartan) the quinine may be given in one dose six hours before the expected paroxysm; if the onset is the more diffuse and the periodicity obscure, the infiltration method will be found best.

The sulphate of quinine is about the least-desirable of the salts we could choose, being so slightly soluble, the hydrochloride being by far the better. Of either one Gram may be taken as a full adult dose, whether given at once or divided into many fractions, this being the full 24-hour dose.

It has been claimed, and never refuted, that one grain of the arsenate of quinine fully equals therapeutically one Gram of the sulphate. I know of no better subject for decision by the huge collective investigation carried on by the members of this Post-Graduate course. Is the claim true? Is it always true, for acute and chronic forms alike? If only sometimes true, to what forms does it apply best? If sometimes not true, then why?

Pernicious Forms—Congestive Chills.—Inject the quinine hypodermically, in full dose—1 to 4 Grams of the hydrochloride. This salt is soluble in 3 parts of alcohol and 9 parts of chloroform, or in 34 parts of water at 15°C while the sulphate requires 740 parts water at the same temperature. The arsenate is soluble in hot water. Do not wait for the action of cathartics, but give full

and plenty of quinine, and give it quickly. Death camps on the patient's trail, and only the speediest aid will fend off the stroke. Then get busy with your chologogs.

Chill.—The chill may be broken by the administration of a centigram of pilocarpine hypodermatically; by a milligram of atropine, or a standard dose of hyoscine, morphine and cactin; or by a dram of chloroform taken by the mouth as little diluted as possible. Or, following an ancient Hindoo maxim, you may give a dose that will "bring the tears into the eyes;" and this may be accomplished by mixing 2 drams each of chloroform, spirit of camphor, oil of cajeput and tincture of capsicum, with 1 ounce of ether, and giving a teaspoonful undiluted. Physiologically, the proper remedy to give is the powerful antispasmodic combination of glonoin and hyoscyamine, of each 1-4 milligram, and strychnine arsenate, 1-2 milligram, given every ten minutes until the cutaneous capillaries are forcibly dilated and the internal hyperemia abated.

Fever.—The rising temperature should be moderated by the defervescent alkaloids, aconitine and veratrine, 1-2 milligram of each every ten minutes; the heart being steadied and the vital depression relieved by adding digitalin, 1 milligram, and strychnine arsenate, 1-2 milligram, with each dose. Judiciously administered these amply fulfil all the needs of any variety of case that may present itself.

Sweating.—During this stage there is need for continuing the vital incitants, dropping the defervescents, and adding quinine hydroferrocyanide, 1 milligram to each dose.

Hematinuria.—Clear out the bowels, and the main causal element is eliminated; give strychnine arsenate to full effect; atropine enough to stop the loss of blood—it never fails; iron arsenate only if anemia becomes evident beyond a peradventure; quinine arsenate in doses of 1 milligram every one or two hours. No other treatment is ever needed—above all, no ergot or other alleged hemostatic, except only the atropine. This is enough and needs no support.

Cachexia.—The arsenates of strychnine, iron and quinine, each as indicated by vital

depression, anemia and continued infection respectively; nuclein to reinforce leukocytosis; correct personal and domestic hygiene; and the treatment of every symptom, as it arises, with the remedies indicated then and there.

Prophylaxis.—Personal and domestic hygiene again; and in cleaning out and disinfecting the privy, do not forget the one the patient carries about in his abdomen and infinitely the more dangerous; saturate with calx sulphurata and arsenic sulphide, 6 centigrams of the one and 1 milligram of the other an hour before each meal and a double dose at bedtime, until the skin smells of sulphureted hydrogen, then half the doses to keep up the saturation. No mosquito will attack any person so saturated.

Enlarged Spleen.—There is one remedy, berberine; adult dose 1 grain per day, divided—1 centigram seven times a day; continued for six weeks. Usually a like dose of quinine arsenate is needed for continued infection. Do not get impatient and thereby be led to increase the dosage of berberine—it has caused rupture of the spleen from violent contraction (but that was from scruple-doses). It is perfectly safe in grain-a-day dosage, and that is enough.

Have complete, quantitative, laboratory examinations made of urine, blood and feces—it always pays to know all one can of a case, and we may find something else co-existent.

I shall add a few case-reports from the physicians of the malarial regions in the north of France, Belgium and Holland, which may give a useful idea of the treatment there found satisfactory:

Pernicious Fever.—Berruyer found a woman, 27 years of age, subject to utero-ovarian disease. Taking a vaginal douche she became chilled and was affected with prostration. The next day she had an intense chill, followed by fever and free sweating; by the following day she was seized with excessive pains in the whole body, then trembling of all members, quickly followed by delirium. At that time, in her neighborhood, there prevailed typhoid and pernicious fevers. Ligatures were applied to her arms and legs and the chill was lessened, the pa-

tient becoming more calm; the heart beat violently, pulse 140, temperature, 100.4°F. Prescription: Digitalin, aconitine, 1 dosimetric granule each every half hour; quinine hydroferrocyanide, 2 milligrams, every ten minutes. That evening she was better; general condition good, pulse 110, heart action almost normal. Continued only the quinine, 3 milligrams every half hour. Laxative saline next morning. The fever had ceased, leaving general debility, for which she took quinine, wine and strychnine arsenate. This woman narrowly escaped death from a pernicious fever.

Palustral Fever.—Van Inweghe, practising more than thirty years in a malarial district of Belgium, testifies to his powerlessness before organic lesions while he was treating them with massive doses of quinine sulphate. Since adopting the method of giving fractional doses of quinine arsenate and the hydroferrocyanide with the addition of strychnine arsenate, however, he says, "it is rare that a fever resists." Burggraeve, who had seen much of these fevers, summarized his method thus: "Raise the vitality with quinine; give strychnine in the cold stage; moderate the febrile reaction, strengthen in the sweating period. In the chill, together with strychnine and quinine, give little spoonfuls of aromatic wine. As the pulse and fever rise, give aconitine, veratrine, digitalin; the last especially to control the heart and restore diuresis, 1 dosimetric granule of each every quarter hour. During the sweating one may give soup and wine. Do not resume quinine unless another access is foreseen."

Syncopeal Larval Fever.—Bruyer describes the case of an old soldier with African fever returning at times for five years. It recurred at a certain interval with a brief chill, syncope, vomiting for many days, ending in edema of each leg alternately. He was given 2 Grams of quinine, with an increase of the symptoms and the debility. He prescribed the quinine and strychnine arsenates, 6 dosimetric granules of each, hourly, then half-hourly. The next access was so feeble the patient believed himself cured. He was given eight doses of the same

drugs, to take two of each every hour. More fever on the morrow, better appetite, edema of the left leg confined the patient to his bed. In a few days he resumed his vocation. The syncopal form is especially fatal despite quinine. The fever precedes and causes the lesions, and hence is easier to jugulate than when it is strictly secondary to lesions preceding it.

Malarial Cachexia.—A young man had been treated more than a year, unsuccessfully, for a tertian intermittent malaria. He was confined to bed, bloated, eyelids infiltrated, lower limbs edematous, skin yellowish, anemic, spleen enlarged, heart irregular and palpitating at the least movement, *bruit de souffle*, no albuminuria; the fever had become irregular. Treatment: For the intermittent, quinine sulphate, 1-2 Gram daily; for the cachexia, the arsenates of strychnine and of iron, of each three dosimetric granules twice a day; to stimulate the stomach, quassin, 3 milligrams before meals. In two weeks the patient was out and in three months had resumed work as a farm laborer. (Coppens.)

This man lived in a country so malarial that nearly everybody had an enlarged spleen. Still, this is not the treatment we should employ. The bowels should have been unloaded by cholagogics, and disinfected: the plasmodia destroyed by quinine arsenate, a grain a day; the spleen reduced by berberine, same dose; the blood restored by iron arsenate; vitality incited by strychnine arsenate; the edema driven off by digitalin. Nuclein should have been added to restore the protective powers of the body.

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PHYSIOTHERAPY IN THE TREATMENT OF MALARIA

The term "malaria," in its specific sense, refers to an infectious fever, intermittent or remittent in character, which is due to the socalled plasmodium *malariae* of Laveran. This microorganism gains access to the body through the bites of insects, mainly mosquitoes belonging to the genus *Anopheles*.

The characteristic signs of malaria are enlargement of the spleen, deterioration of the blood and acute attacks consisting of chills and fever of variable duration and frequency. In an ill-defined general sense the term malaria refers to the vitiated state of the system which is usually found in malarial patients, although it cannot be denied that many forms of autointoxication (especially the so-called "bilious" condition) are erroneously looked upon as being of malarial origin.

The "Darkness" Treatment.—Some years ago American surgeons in Puerto Rico investigated the truth of the statement made by the natives that dark, gloomy weather lessened the severity of malarial attacks and that total darkness would completely prevent them. Experimentation along these lines substantiated the correctness of the statement. It was shown that confinement in a dark room did prevent malarial attacks. For a year or two the "darkness"-treatment was quite a fad in the West Indies. The two scientific facts which these experiments have demonstrated beyond the shadow of a doubt are:

1. In a person bitten by a mosquito and thereby infected with the plasmodium exposure to sunlight favors the malarial outbreak and increases its severity. This is not due to any specific action of light or special susceptibility of the germ to light. Light stimulates the cutaneous circulation and has a distinctly irritating effect on the red corpuscles of the blood which carry the germ. In this way the germ is aroused and disseminated. Hence the malarial exacerbation.

2. In a person not infected with malaria exposure to sunlight increases the resisting power of the system by the tonic effects of light on the red blood-cells. Under given favorable conditions light may act as a prophylactic in the sense indicated.

The fact that mosquitoes are more active in bright weather and that, therefore, infection is more likely to occur, should not be lost sight of.

The Malarial Paroxysm.—In the treatment of chills and fever much good can be

done by forcible elimination through the skin. During the chill the application of dry or moist heat to the entire body-surface is to be recommended. The cutaneous reaction, consisting in active hyperemia and diaphoresis, shortens and ameliorates the attack. The fever which follows is less severe and does not last as long.

I beg to remind the reader of a previous lesson in which the effects of powerful cutaneous elimination on metabolism and oxidation were discussed. The dry-heat cylinder, the electric light bath or the moist hot-pack may be employed. Hot drinks may be given during the chilly stage, to be superseded by cooling drinks during the febrile stage. If sweating is induced an hour or more before the expected attack by the use of the electric-light bath, the hot-air cylinder or a complete hot-pack, the malarial paroxysm is very materially modified in its course and manifestations and not infrequently entirely prevented. Following the acute paroxysm a long-continued sun-bath is beneficial.

Chronic Malaria.—This term is used to express the vicious state of the system produced by acute malarial infection. It is the postparoxysmal or interparoxysmal state which is sometimes called chronic malaria. "Malarial cachexia" is a term which is also employed in connection with the subject under consideration. To combat this chronic condition the following therapeutic measures should constitute the main features of the treatment:

1. *Carbohydrate diet* is to be insisted upon in order to encourage active metabolism and prevent retention and accumulation of waste. Exclude meats entirely, encourage the use of raw fruit and fresh water in large quantities.

2. *Irrigation of the colon* every two or three days is a very valuable auxiliary, especially in the "bilious" types of chronic malaria.

3. *Active elimination* two or three times a week is of overwhelming importance. The electric-light bath answers an excellent purpose in this connection, as does the dry-heat cylinder. Where these technical resources

are not available, the complete pack (hot or cold, depending on the reactive power of the individual patient) may be substituted.

4. *Sunlight and fresh air* are of cardinal virtue. It may seem trite to insist upon the hygienic value of these fundamental pillars of all rational therapy. The plasmodium thrives best in marshy, humid places where decomposition and fermentation are going on. This holds good in regard to its habitat in the body as well as outside of it. Where the circulation is sluggish, metabolism slow and elimination imperfect, the soil is excellent for the malarial poison. It is imperatively necessary to counteract the effect of suboxidation and autointoxication by stimulating the circulation, promoting metabolism and increasing elimination. Hence the importance of sunlight and fresh air in the treatment of the malarial state.

Enlarged Spleen and Liver.—A large spleen sometimes yields and is made to shrink if gentle but deep petrissage is systematically employed. Vibration over the region of the liver is useful. Pope recommends the use of the alternate hot and cold douche over an enlarged liver and spleen. Galvanism (5 to 6 millampères, negative pole to affected organ, positive pole at a distance) is not without value. Static sparks over the enlarged organs or, better still, the static induced current may be used with much benefit. Good results follow the use of the high-frequency current (vacuum electrode over affected area). Local sun-baths are recommended by many.

Headache.—Negative static breeze for ten to fifteen minutes. Massage over temples and forehead, pressure over occiput. Malarial headache is ordinarily of stomach or liver origin and should be treated accordingly.

Biliousness.—This term conveniently covers the vast array of symptoms produced by a torpid liver. It is, therefore, an auto-intoxication, the breeding place of the poison being the sluggish portal circulation. Irrigation of the colon is always indicated. Deep abdominal massage, especially over the epigastrum and the right hypochondriac region, is very beneficial. The abdominal

cold moist-pack may be given every day or two for an hour. The alternate hot and cold douche to the right hypochondrium and also over the dorsal region of the spine is very effective, giving force and tone to the blood-mass within. In most cases a general sweat every three or four days is very desirable.

Request for Information.—In connection with the "darkness"-treatment of malaria, referred to above, I should like to ask my colleagues in the malarial districts of the South for some information. Finsen once stated that the negro is immune against malaria on account of the pigment in the skin absorbing the light-rays which help to disseminate the malaria-germ. Is the negro really immune? Does he suffer from intermittent fever? Is the disease of a milder form in the negro?

OTTO JUETTNER.

Cincinnati, O.

COMMENTS ON THE LESSON

And now for another year of hard, earnest work! We are entering a study period in the Post-Graduate Course which should be of exceeding interest and may be made so if we can have the cooperation of every reader. We want more of the short articles which we have been publishing—more criticism, more suggestions.

While we have many students enrolled we should have five times as many. Why may we not? Numbers breeds enthusiasm. The more that participate in these studies the more rich and varied will be the comment, and the greater will be the reaction upon the teaching body.

We should be exceedingly glad to have groups of physicians take up the Course together. A good example is that recently set by "The Redbank Physician's Protective Association," a Pennsylvania organization which enrolled as a body, every member becoming a subscriber to CLINICAL MEDICINE, and all agreeing to take the Course. They have the advantage of association, of being able to study together as a local group. There is not only the knowledge to be gained; there is the social advantage, the

pleasure of "getting together" at regular intervals. I wonder why we cannot have many more of these local groups, and in all parts of the country.

The President of the Redbank Association, Dr. C. E. Sayers of Hawthorn, has promised to send us their plan of the organization. We shall be glad to print it in an issue of CLINICAL MEDICINE as a guide to other local societies which may decide (as we hope many will) to go and do likewise.

This month the subject is "Malaria." It should be of exceeding interest to all our readers, but particularly so to the many who are practising in the South or in the tropics. We have subscribers in Mexico, South and Central America, Asia Minor, China, Africa—indeed, all over the world. Brother, you are respectfully invited to participate.

Right here I want to say that those who are not formally enrolled as students can do their share to make the Course a success by sending in germane items of helpfulness whenever and wherever they see an opening. Many have written us that they read every lesson through with enjoyment yet have never enrolled as students. We shall appreciate the cooperation of every such a one.

A "DEGREE" FOR STUDENTS IN OUR POST-GRADUATE COURSE

When we organized the Post-Graduate Course we made it clear (or at least tried to) that the School granted no degrees and that its certificate carried with it no legal right to practise in any state. It is simply an evidence of medical study done by correspondence, and well done. We wish to restate that fact, so that there may be no misunderstanding of what follows.

Dr. Otto Juettner has perfected arrangements with the Cincinnati Post-Graduate School of Physiological Therapeutics by which it is made possible for students taking our postgraduate work, through CLINICAL MEDICINE, to obtain the degree of B. Ph. (Bachelor of Physiotherapy). The candidate must fulfil the following conditions:

1. Applicant must be a graduate of a reputable medical school and must be a *bona*

fide practitioner of medicine in good standing with his school.

2. Applicant must take the Course in THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

3. Applicant must pass a written examination in physical therapeutics, accompanied by a statement that the paper presented has been prepared by himself, unaided.

4. Applicant must matriculate as a correspondence-student of the Cincinnati Post-Graduate School of Physiological Therapeutics and present his credentials as to graduation and standing. Within a week after his application is received he will be informed as to his eligibility.

5. The degree will be conferred six months after application has been received and the applicant has been found a suitable person for the degree.

All other information will be forwarded by personal letter on writing to Dr. Otto Juettner, Cincinnati, Ohio.

TALKS ABOUT TYPHOID]

Drug-Treatment of Typhoid.—Dr. F. F. Attix of Lewiston, Montana, has the following to say regarding the method he employs in the drug-treatment of typhoid fever:

"First, clean the mouth with a tooth-brush and an alkaline mouth-wash. Secondly, give calomel, gr. 1-6; podophylin, gr. 1-6, one such dose every hour for six or eight doses. Saturated solution of magnesium sulphate, or in the effervescent form, to clean out; occasionally half a teacupful of castor oil will be needed to complete the job. High saline enemas or *enemas* with sulphocarbonates frequently are indicated. Once you have completed the work, it is easy with simple laxative doses to maintain a clean canal.

"The indications for intestinal antiseptics are, to prevent the too rapid multiplication of typhoid and other bacteria; to render their feeding ground less desirable for their propagation and, by so doing, diminish their numbers; to limit the absorption of their toxins and the depressing effect on the human economy, thus making it more able to resist the invasion of the germs and their

poison. In this manner a severe type is modified and complications—high fever, great depression, loss of weight—usually are avoided.

"When typhoid germs have reached the blood-stream, the case is usually well advanced and the natural resistance is largely overcome. It is more difficult to master this condition, especially if the germs are present in large numbers. Calcium sulphide, gr. 1-6 hourly until saturation and then often enough to maintain its effect, is useful. Merrell's normal tincture of echinacea, 15 to 30 drops every two hours, also is useful. Solution of nuclein, 5 to 15 drops on the tongue every two hours, to increase leukocytosis, is a valuable aid in fighting bacilli by increasing the phagocytic power of the blood.

"Medicine used to reduce the temperature must do so gradually. Aconitine and strychnine, given in small and frequently repeated doses to effect, are useful. If pulse and heart indicate a cardiac tonic, digitalin may be added and the dosimetric trinity may be used. These are especially indicated the first week of the disease."

Use of Sulphocarbolates.—In commenting on the use of sulphocarbolates in the treatment of typhoid fever, Dr. John Stuart, Monon, Indiana, has this to say:

"I use the sulphocarbolates because clinical experience has taught me that I can get my typhoid patient up in shorter time and in better condition than I can without the sulphocarbolates. I find that when the sulphocarbolates are used, the bowels can be rendered so nearly aseptic that the bismuth salicylate will hardly stain the stools.

"I find that it is of little importance what the name of the disease may be, but it is exceedingly important that the alimentary tract be clean. Auto intoxication is the key to a host of human ills. The "clean-out, clean-up and keep-clean" principle can be enforced in a very satisfactory manner when the sulphocarbolates are brought in to aid.

"In gastrointestinal diseases produced by food that cannot be digested fermentation takes place, gases are evolved, the entire digestive tract is distended. The result is pain, vomiting, diarrhea. As soon as the

pain has been relieved and the tract cleared of the foul material, zinc sulphocarbolate may be given. It will then do good work.

"In phthisis zinc sulphocarbolate will keep the bowels aseptic and aid digestion by overcoming fermentation and will control the diarrhea. There may be reasons for not using the sulphocarbolates, but until I find satisfactory ones, I shall continue to use them."

High Temperature; Intestinal Antiseptics, etc.—Dr. Fremont E. Wood, Vella Verde, Sonora, Mexico, has had a large experience in the treatment of typhoid fever and other infectious diseases, and we are always interested in reading accounts of his experiences. Dr. Wood writes as follows regarding typhoid fever:

"The highest temperature I have taken was 104°F. Condition, semimoribund, administered medicine with difficulty; patient obeyed order to swallow—this from half-unconscious habit, he being a soldier. Succeeded in administering 20 grains intestinal antiseptic of the three sulphocarbolates; and a capsule containing 1 grain podophyllum and 2 grains monobromated camphor. Also managed to get the sick man to take a copious draught of hot water. I invariably assure myself that the regulation dose of podophyllum has been taken, then do not lose any precious time to administer the intestinal antiseptics. This patient was not brought to me until the acme of the fever was close at hand. Two hours after the initial dosage I made it a point to administer personally a repetition of the combined antiseptics and monobromated camphor and added gelsemin in as large single dosage as I dared to give, to tide the man over until such time as I could see him again.

"Are we ever fault-finding with conditions where in reality the invalid is surrounded with comforts? Are we also fault-finding with trained nurses? Particular about diet? The sick, always with us, are not even sure of being able to take their medicine and so often get none except we give it with our own hands, and they frequently await our next coming wholly without attendants of any kind.

"My patient made an uneventful recovery. The intestinal antiseptics lessened the duration of the fever, which I continued with the monobromated camphor and gelsemin till the abatement of the fever, following with the triple arsenates through the convalescent stage.

"I have depended on cactin for the purpose of regulating the circulation in febrile states more than on any other one remedy, combining it with such treatment as will eliminate intestinal toxins and prevent their further production. This in typhoid types and typhoid pneumonia. In one case of the latter kind I had excellent results, combining sparteine, lobelin, podophyllin and the compound intestinal antiseptics—the podophyllin administered with the initial dose of the combined intestinal antiseptics. The patient was kept to the point of slight nausea, for three days, on lobelin. Convalescence was rapid on the triple arsenates. I have also employed, in typhoid malaria, emetine in conjunction with the above combination of podophyllin and sulphocarbolates with excellent results so far as circulatory improvement was concerned."

Effects of Intestinal Antiseptics.—Dr. William C. Post of Maquoketa, Iowa, always has something practical to report. He says:

"By the use of intestinal antiseptics I seek to neutralize the toxins of perverted digestion due to the derangement of mechanism and perversion of secretion concomitant with the attack, and also to destroy a very large proportion of the specific bacilli and their own toxin, where colonized in the small intestine, thereby assisting in the prevention of further invasion of the blood-stream and extension of infection. As to the modification of the course of the disease by this procedure, it is plain to see. Headache is improved; delirium, if present, passes away; temperature falls markedly; and the whole organism, relieved of this part of the invading force, is in much better shape to wrestle with the remainder of the invaders and their specific poison. Thus it can be said truly, that, if evacuation, elimination and intestinal antisepsis be thoroughly carried out in the begin-

ning of the attack, its intensity will markedly be relieved and its duration much shortened."

The Diet in Typhoid.—Dr. Post's answer to another question is also very interesting. He writes:

"Logically, we should aim at limiting to the utmost degree the possibility of taking in any further infection of any kind, so we must see to it that the food is free from all possibility of contamination and the drinking water absolutely pure. We also should endeavor to limit the amount and character of food likely to put strain on the already weakened digestive powers, or which through imperfect or perverted digestion would furnish material for fermentation or perversion of metabolism, which, in turn, would generate other toxins to be absorbed and still further, to poison the already weakened body. Then, too, we should try to furnish a dietary which should give enough calories to make good the amount 'burnt up' in the production of the fever, and so prevent drawing on the tissues of the body itself and causing undue emaciation.

"The diet of the typhoid patient depends upon his condition, and there can be no cast-iron rule to regulate it. For the first twenty-four hours of the concurrent treatment it will be well to give the patient nothing but pure water, which, by the way, he must have in plenty throughout the course of the attack. After that interval of abstinence he may have fruit juices, beef juice, egg-albumen flavored with orange or vanilla, milk (preferably soured by the use of cultures of the bacillus of Massol), fresh buttermilk, and in favorable cases, sweet milk and raw eggs. After a few days, if doing well, he may have cereal waters and gruels, and soft-boiled eggs, cereal flake-foods, etc., gradually establishing a fuller diet according to his improvement in symptoms. We must individualize the diet of every case, and the changes from a liquid to a semisolid, and finally solid dietary must be very gradual and depend absolutely upon the results of each change."

Value of Sulphocarbolates.—Here is another strong testimonial for the sulpho-

carbolates. It is from W. P. Barron, Carmona, Texas:

"I have invariably been able to influence favorably the course of all febrile diseases by the use of the sulphocarbonates. I can see no reason why I should not give them, but there seems to be every reason why I should. I employ them in malaria, pneumonia, grip—in fact, wherever I have a condition of fever in my cases. In four years I have had but three deaths: two premature twins and one case of chronic Bright's disease—this in the malarial belt of Texas, with 1500 inhabitants working at a sawmill, which never makes for a health-resort. I think the sulphocarbonates have helped in this record, together with the other alkaloidal methods. Whenever I am 'shown' a better way, all right, but until then, sulphocarbonates 'for mine.'"

Dr. C. H. Willingham of Whitehouse, Texas, has this to say about the sulphocarbonates in typhoid fever:

"My reason for using the sulphocarbonates in typhoid fever is, that I know that since I have begun the use of them I have had better results than before their employment. After cleaning out the intestines they aid in disinfecting the bowels and also to limit the multiplication of the typhoid bacilli and their toxins; consequently the bowels are kept in a better condition."

EXAMINATION QUESTIONS

1. What is the present teaching concerning the mode of transmitting malaria? Outline measures to prevent it, illustrating with the experience at Panama.
2. Give a plan for personal prophylaxis against malaria. What did Reed, Carroll and Lazear demonstrate concerning it, and how?
3. At what stages of the disease should quinine be given, in what manner and in what doses (1) in intermittent fever, (2) in remittent fever? Explain why.
4. What is meant by (1) quotidian, (2) tertian, (3) estivoautumnal fever? Differentiate according to cause.
5. How would you (or do you) treat the chill of severe malarial fever? The comatose types of pernicious malaria?
6. What influence has the alimentary canal on the production and severity of malarial paroxysms? What treatment do you suggest?

7. In which forms of malaria would you use the smaller dosage forms of quinine (quinine arsenate and hydroferrocyanide) and in which the large or massive doses?

8. Prepare a table showing the solubility of the most important quinine salts, and the percentage of quinine alkaloid which each contains.

9. Give technic for hypodermic administration of quinine.

10. What are the characteristics of malarial neuralgia, and how would you treat it?

11. Upon what hypothesis should calcium sulphide be used in the prevention of malaria?

12. What is "black-water fever"? How do you treat it?

13. What remedies are of most value for the post-febrile anemia and cachexia of malaria?

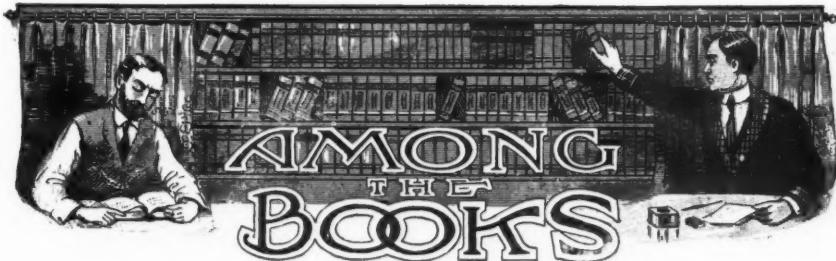
14. What is the "darkness" treatment of malaria? State the theory of the fluorescent action of anti-malarial remedies.

15. How would you combat chronic malaria, hygienically, dietetically, etc.?

WE WANT COMMENTS

Just a final emphasis, to impress upon you that we want comments on the subject-matter of this lesson. For instance, next month we hope to get a wealth of instructive matter concerning the treatment of malaria in all its forms and its multiple complications and sequels. This request is made not only to those who take the Post-Graduate course but to everyone who may go through the lessons. We are particularly anxious to draw out original ideas, therapeutic technic, practical treatments which have been tried and found good on the actual firing line.

Furthermore, we give fair warning that next month (February) we shall take up Influenza. We want to make this lesson one of the strongest we have ever had and we are going to appeal to you, the student body, to come forward with as many live suggestions as you can dig up from all the resources of your minds and all the richness of your many experiences. Some of these may well be printed next month, others held till the month that follows, but *get busy now*.



WITTHAUS' "MEDICAL JURISPRUDENCE"

Medical Jurisprudence, Forensic Medicine and Toxicology. By R. A. Witthaus, A. M., M. D., of Cornell University, and Tracy C. Becker, A. B., L.L. B., of the University of Buffalo, with the collaboration of many eminent authorities. Second edition, volume iii. New York: William Wood & Co., 1909. Price, per volume, \$6.00.

This volume of this highly important and authority-inspiring work steadily maintains the excellency and comprehensiveness with which it started out, as evidenced in the first volume issued and continued in volume ii. The following is an enumeration of the subjects discussed in the present volume: Medicolegal relations of vision and audition, and injuries of the eye and ear; insanity in its relation to medical jurisprudence; mental unsoundness in its legal relations; care and custody of incompetent persons and their estates; digest of the statutes of all the states relating to the above; examination of blood and other stains; examination of hairs. This work is sold only in full sets.

BALL'S "BACTERIOLOGY"

Essentials of Bacteriology. By W. V. Ball, M. D. Sixth edition, thoroughly revised, with 135 illustrations, some in colors. Philadelphia: W. B. Saunders Company. 1908. Price \$1.00.

This is one of the well-known series of Saunders Question Compends, uniform in style with its numerous predecessors. It is just what it professes to be, "a concise and

systematic introduction to the study of bacteria and allied microorganisms." A very useful little book for the busy physician's handy library and laboratory.

EMERSON'S "LEGAL MEDICINE"

Legal Medicine and Toxicology. By R. L. Emerson, A. B., M. D., New York and London: D. Appleton & Co. 1909. Price \$5.00.

"The subject of legal medicine is one which is too little understood and appreciated by the general practitioner and medical student. This book has been written to fill the need of a single volume, treating the subject from as practical a point of view as possible and with special reference to the need of the busy practitioner who suddenly finds himself confronted with a medicolegal case." Thus says the author, one time instructor in physiological chemistry in Harvard University, in his short preface and in the succeeding pages, and he certainly thoroughly adheres to his well-conceived program.

The book is divided into three parts, the first being devoted to legal medicine. The subjects here treated are sudden death due to natural causes; signs of death; rigor mortis and putrefaction; medicolegal postmortem examination; identity; sex and age; death by asphyxia; hanging, strangling, suffocation, drowning, death from cold, heat, electricity and starvation; burns; wounds; fractures; rape; pregnancy; infanticide; sexual disability in the male and in the female; paternity, legitimacy; malpractice; coroner's inquests; insurance; medical witnesses, evidence, testimony; legal points affecting phy-

sicians. Part two covers toxicology; gaseous, inorganic, organic, alkaloidal, and ptomain poisons; blood; seminal stains. Part three gives all individual state laws on the practice of medicine. Illustrations are given of some plants from which the more frequently used alkaloids are derived; also plates showing effects of poisoning with arsenic, paris-green, mercury, phosphorus, carbolic acid, potassium cyanide and oxalic acid; also spectra of blood.

HIRSCHMAN'S "DISEASES OF THE RECTUM"

Diseases of the Rectum. By Louis J. Hirschman, M. D., of the Detroit College of Medicine. With 147 illustrations, mostly original, including two colored plates. St. Louis: C. V. Mosley Medical Book and Publishing Company. 1909. Price \$4.00.

This book is intended for those diseased conditions of the rectum which can be treated in the office without resorting to general anesthesia, and in which local anesthesia may suffice or none at all is required. In this way the author permitted himself more room, and this he wisely, clearly and comprehensively occupied with his practical and excellent teachings. This is a book which will prove of great service to the young practitioner especially although of not less interest and instructive points to the oldest of us.

"DISEASES OF THE BONES AND JOINTS"

Diseases of the Bones and Joints. Clinical Studies by Joel E. Goldthwait, M. D., Charles F. Painter, M. D., and Robert B. Osgood, M. D. Illustrated. Boston: D. C. Heath & Co. 1909. Price \$6.00.

It is a happy idea that a few physicians who chance to be interested in a certain given disease should associate themselves in its closer study, more or less *pro bono publico*, as it were. Then, too, they will be likely to do good work when they will remember that *tres faciunt collegium*; that while three collaborators seems just right, too many may spoil the broth, because *tot homines tot sententiae*. To this happy thought is owing

the existence of the book before us. As to treatises on diseases of the joints the profession is not much overcrowded and so every monograph from competent sources on this topic, such as this present "studies" is, must prove most welcome to the studious physician.

Nor is this excellent monograph comprehensively exhaustive, as the authors themselves modestly admit. The book comprises 673 royal octavo pages printed comfortably for the eyes to read, and an index of ten pages. The first 240 pages are devoted to tuberculosis of bones and joints, the next 166 pages to nontuberculous diseases of the joints, and the following 230 pages to various diseases of the joints, besides chapters on aneurism, tabes mesenterica, stoop-shoulders, congenital elevation of scapulae, subdeltoid and subcoracoid bursitis, recurrent dislocation of shoulder, brachial neuralgia, and the use of plaster-paris in orthopedic surgery. No doubt this book will serve to create in its readers an appetite for more of such mental pabulum.

BARWELL'S "DISEASES OF THE LARYNX"

Diseases of the Larynx. By Harold Barwell, M. B., F. R. C. S. London: Henry Frowde. Price \$1.50.

This book, small as it is, will be found helpful to the general practitioner and not without much interest to the American specialist. It emanates from the pen of a practising physician and is (perhaps *therefore*) full of treatment as well as of symptomatology.

AIKENS' "STUDIES FOR NURSES"

Primary Studies for Nurses. By Charlotte A. Aikens. Illustrated. Philadelphia and London. 1909. Price \$1.75.

We find this book a most excellent medium for introducing a knowledge of the human body in health and disease to anyone who has passed the courses taught in our common schools. Moreover, it ought to stimulate the earnest reader of this book to ask for more

of that kind, and to him or her that asks answers will be readily given in our age.

SMITH'S "SUTURE OF ARTERIES"

Suture of Arteries: An Experimental Research. By E. Archibald Smith, M. B., F. R. C. S. London and New York: Henry Frowde. Price 90 cents.

This is one of the valuable and neat medical publications of the Oxford University Press. The subject of this book is of great appealing scientific interest and will amply repay a careful reading.

"PRACTITIONER'S VISITING LIST"

We have received a copy of the excellent visiting-list published by Lea & Febiger, Philadelphia. This is one of the oldest and one of the best of its kind. In fact, it has been before the profession so many years that we need not say a word in its praise—just a reminder should be enough. There is the usual dose-table, suggestions for emergencies, etc. It is made for 30 patients, *with* reading matter, and for 60 patients, *without* reading matter. Price for either is \$1.25. Address Lea & Febiger, Philadelphia or New York.

WARBASSE'S "MEDICAL SOCIOLOGY"

Medical Sociology: A Series of Observations Touching upon the Sociology of Health and the Relations of Medicine to Society. By James Peter Warbasse, M. D., Surgeon to the German Hospital; Attending Surgeon to the Seney M. E. Hospital, etc. Published by D. Appleton & Co., New York and London. Price \$2.00.

Those who have had the opportunity to read the brilliant editorials of Dr. Warbasse, first appearing in *The Journal of the New York State Medical Society*, later in *The American Journal of Surgery*, will recognize some old friends in this book. But it is much more than a compilation of editorial or other previously published writings. As the matter is here presented it is a fairly complete, if somewhat disjointed, presenta-

tion of the great sociologic questions of medical and semimedical interest. Some diverse problems, as the alcohol question, the venereal peril, sexual hygiene and sexual morality, the social evil, our high-pressure social system, individual immunity, household sanitation, Christian science and the Emmanuel movement, receive intelligent and earnest consideration, and they are treated in such an interesting way as to be appreciable by any layman.

The second half of the book is of special interest to physicians, and in it the author discusses such subjects as bacteriology and botany, therapeutic tendencies, future fields of medical activity, medical science and human progress, the diffusion of medical knowledge, preparation for the study of medicine, medical examinations and licensing, the physician and politics, medical libraries, the history of medicine, medical societies, doctors' sons, and many other things of equal interest.

Altogether this book is the work of a thoughtful, scholarly man, one that cannot be read without profit, and hardly without pleasure. We earnestly recommend its purchase.

"INTERNATIONAL CLINICS"

International Clinics. Volume III. 1909. This is a quarterly of illustrated lectures and specially prepared original articles on all parts of medical practice by leading physicians from all parts of the civilized world. It is published by the J. B. Lippincott Company (Philadelphia and London) at \$2.00 per volume. It has always caused the writer wonder how such an amount of most valuable medical literature, not copied, plagiarized or pirated, but genuine first-hand and first-class articles could be offered, year after year, for the very low price asked for these volumes. What else can it be but a large market that enables the publishers to be seemingly benevolent and not be losers?

This present volume before us, like its predecessors, is replete with articles on subjects which interest the profession at the present day. We hesitate to speak with more

emphasis of any one article in this volume, but as a matter less frequently met with in medical literature we would call particular attention to Dr. Henry K. Pancost's most excellent contribution on radiography of the gastrointestinal tract. There are many and some quite novel points to be learned from its perusal.

GARROD'S "ERRORS OF METABOLISM"

Inborn Errors of Metabolism. By Archibald E. Garrod, A. M., M. D. London and New York: Henry Frowde, Oxford University Press. 1909. Price \$1.35.

The subject matter of the six chapters of this little book is organic chemistry. The first chapter, after the striking title of which the whole book is named, tells of many facts in organic chemistry which fully justify the motto on the title-page quoted from Aristotle: "In all things natural there is something to be wondered at." The other chapters treat of albinism, alkapturia, cystinuria, and pentosuria. And lest we forget what we may like to remember, there is a good index of eleven pages to help us.

SCHORER'S "SERUM THERAPY"

Vaccine and Serum Therapy. Including also a Study of Infection, Theories of Immunity, Opsonins and the Opsonic Index. By E. H. Schorer, B. S., M. D., of the University of Missouri. Illustrated. St. Louis: C. V. Mosby Company. 1909. Price \$2.00. A very useful book on scientific medical problems of modern date, much spoken of and not yet fully understood.

DORLAND'S "POCKET MEDICAL DICTIONARY"

American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, A. M., M. D., containing the pronunciation and definition of all the principal terms used in medicine and the kindred sciences, along with over sixty extensive tables. Sixth Edition, Revised and Enlarged. Philadel-

phia and London: W. B. Saunders Company. 1909. Price \$1.00.

This well-known handy dictionary comprises 598 pages of 32mo. size, paper thin yet strong, cream color, print small but very clear, flexible morocco leather, rounded corners, gilt edges. There is an attractiveness about this little volume which is difficult to describe though not difficult to account for. Perhaps it has something to do with the fate of which Horace says, *Habent sua fata libelli.*

"PRACTICAL MEDICINE SERIES"

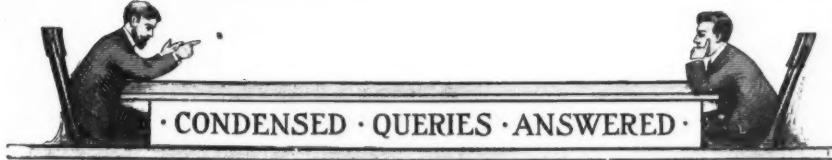
Practical Medicine Series. Volume IV. Gynecology. Edited by E. C. Dudley, A. M., M. D., and C. von Bachellé, M. S., M. D. Series 1909. Chicago: The Year Book Publishers. Price, per volume, \$1.25.

This review of female diseases during the preceding year is very extensive and of great interest in every one of its departments. These Year-Book publications are an immense help to the studious physician who wishes to keep up with the never-ceasing progress of the profession the world over. The price for the full annual set of ten volumes is \$10.00.

HAAB'S "ATLAS OF DISEASES OF THE EYE"

Atlas of the External Diseases of the Eye, Including a Brief Treatise on the Pathology and Treatment. By O. Haab, M. D., Zuerich. Third Edition, Revised. Edited by G. E. De Schweinitz, A. M., M. D., of the University of Pennsylvania. With 101 colored lithographic illustrations. Philadelphia and London: W. B. Saunders Company. 1909. Price \$3.00.

The series of atlases, of which this one before us is a revised third edition both of the German original and the English translation, have gained for themselves an undisputable place of usefulness in medical and surgical practice. It is gratifying to see that the excellency both of text and illustrations have been kept up during these many years undeteriorated. *Esto perpetua.*



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5516.—“Hydrocele.” In your December number, page 1400, Query 5516, you give treatment for hydrocele. If you refer to THE AMERICAN JOURNAL OF CLINICAL MEDICINE of 1907, page 380, you will find the catgut method described by Dr. Geo. W. Lawrence, of Lakewood, N. J. Since reading that article I have made use of the catgut, according to the method given by Dr. Lawrence, with the best results. My first case in which I tried it I had shortly after reading that article. This man refused an operation and every few months I emptied the sac with the trocar. I now use the catgut ligature and he has no more trouble with the hydrocele.

J. WM. TRABERT.

Lebanon, Pa.

[We suggest that our readers refer to the files of CLINICAL MEDICINE for the complete data. Dr. Lawrence inserts a small trocar into the hydrocele, then inserts through it ten to twelve inches of No. 2 or 3 sterile catgut. “After the catgut is entirely through the

cannula and coiled within the sac, remove the cannula and seal the opening with collodion or zinc-oxide plaster.” The catgut must be absolutely sterile. There is little or no reaction, and within three to nine weeks the hydrocele is cured.—ED.]

ANSWER TO QUERY 5512.—“A Galactagog.” I note with interest R. H. W.’s Query No. 5512, in the November CLINICAL MEDICINE. I should like to suggest “liquor galactogogue” for his consideration. I have employed the preparation in apparently similar cases, in tablespoonful doses every four hours. Within twenty-four to thirty-six hours a sufficient flow of milk has been established. In some cases further medication was not required. In others, one or two tablespoonfuls daily has maintained a normal flow of milk. It is undoubtedly not a specific, yet I have used it in a number of cases without failure.

WM. V. GALE.

[Will someone tell us something about this preparation?—ED.]

QUERIES

QUERY 5525.—“The Old Dosage Question Again.” W. W. S., New Mexico, writes: “Regarding cypripedin and scutellarin, the dosage and method of administration as given in the ‘Digest’ and (page 204) ‘Alkaloidal Therapeutics’ are (at least, inferentially) contradictory; certainly, when taken together, ambiguous.

Cypripedin and scutellarin are entirely harmless (nontoxic) concentrations; 1-12 grain of cypripedin or 1-6 grain of scutellarin represents the smallest known-to-be-effective dose for an adult. A basal idea of positive therapeutics is the frequent repetition of such a dose to effect. Naturally, with certain drugs and where pronounced action is de-

sired, we increase the dosage, giving two, three, or even more granules at a time. "A" will require one, "B" two, and the conditions present in "C's" case may call for four granules. Had you only the larger dose you would be giving "A" too much. It is very easy to give two or three 1-6 grain granules, but not to cut up 1-grain granules!

All this has been tried out not once but many, many times and, as we have already pointed out, the most satisfactory method is to have as a standard "the smallest known-to-be-effective" quantity of the drug; this can be repeated or added to as occasion may demand. Where you give two antispasmodics together you give the smaller dose of each as a rule, though in some instances we do not hesitate to give large quantities of each remedy. The conditions present in the individual control dosage. In ordinary conditions we should give two doses of cypripedin, gr. 1-6, three to six times daily. Here and there, for the first day or two, we should give as much as a grain. The dosage of scutellarin is practically the same, but it is rarely desirable to give less than 1-6 grain even to children, so the standard granule is 1-6 grain. You will find many minor conditions existing in which 1-12 grain of cypripedin at somewhat frequent intervals will give you better results than larger doses. The value of the "small dose to effect" is gradually being recognized.

In considering the alkaloidal granule, Doctor, please bear in mind the fact that the smallest dose listed is considered the standard granule, i. e., the smallest known-to-be-effective dosage. The smallest dose for an adult may be regarded as the usual full dose for a child over five. The positive therapist recognizes no arbitrary maximum or minimum dosage—just a definite, effective quantity of an always equally active remedial agent is administered at short intervals *to effect*, remedial or physiological. A moment's study and you will begin to grasp the wonderful simplicity and limitless possibilities, and then, Doctor, *the results* one obtains.

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QUERY 5526.—An "Anti-Vomiting Tablet." J. Y., Rhode Island, sends us a tablet-

triturate and asks us what it contains. He says: "This tablet is used by a neighboring doctor in vomiting of children, with great success. What is the best treatment for this condition? What is the best hypnotic for children?"

We are unable to identify the tablet-triturate. There is a certain amount of menthol and saccharin in the tablets; further than that we cannot state.

Vomiting is, of course, a symptom, and in order to control it we must recognize the underlying cause. Cerium oxalate is an excellent remedy in the vomiting of pregnancy and in "acid dyspepsia." Menthol is another useful agent. Small doses of codeine or morphine are given by some practitioners, but, as we have already pointed out, this is generally poor practice. We must, if at all possible, remove the cause of the vomiting. An emetic and high enema will often stop obstinate vomiting. Indeed it will almost always do so when of gastric origin.

Do not forget that psychic (recurrent) vomiting affects children, usually between the second and twelfth years. Attacks may come on every few days or at several weeks' intervals. Such vomiting is probably of nervous origin, though the excessive formation of urea and general disturbance of metabolism may be the cause. It has been pointed out by observers that the ordinary ratio of urea to uric acid, 54 to 1, becomes early in such attacks as high as 150 to 1. The vomiting is continuous and dynamic in character. Some children state that they have a "crawling feeling" in the epigastrium.

There may be fever; the tongue is slightly coated; vomited matter is at first of an ordinary character, later mucus and bile with streaks of blood will be noted in the vomitus. Its reaction is acid; food or water is instantly rejected. The retching is extremely violent when the stomach is empty.

It is not always easy to distinguish cyclic vomiting from the variety which accompanies meningitis or the exanthemas. Read Candler's "Every-Day Diseases of Children;" the chapters on diseases of the stomach and bowels are well worth many times the price of the volume. Small doses of

cinnamon water and the application of counterirritants over the pneumogastric and epigastric region are to be recommended. Minute doses of cocaine serve the writer excellently. In all these cases a few divided doses of calomel and podophyllin followed by a saline flushing will prove efficacious.

To produce sleep in children with drugs is mostly not a desirable procedure. The healthy child will sleep without opiates. However, passiflora, hyoscyamine, veronal, elixir of red poppy leaves and scutellarin may be tried where indicated. In our own practice a sponge-bath and a few doses of the "calmative" formula work perfectly.

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QUERY 5527.—A Case of "Dropsy." J. R., North Carolina, is treating a case of dropsy and asks whether we can suggest anything that will help move the water.

Dropsy, Doctor, is a symptom and before any positively effective treatment can be instituted we must know something, at least, about the underlying pathology. Give us a clear clinical picture and, if possible, send a specimen of urine, four ounces from the entire amount passed in twenty-four hours, stating total amount passed in that time.

In the meantime do not forget the efficacy of elaterin as a hydragog cathartic. Grain 1-67 to 2-67 may be exhibited hourly until watery stools are secured, maintaining effect with apocynin. Continue for two or three days, rest a day or two and repeat if the patient is fairly strong. We usually give 1-12 grain of apocynin every two hours. Keep the skin active with daily hot epsom-salt sponge-baths. Give small doses of blue mass and soda, with euonymin, leptandrin or podophyllin (as may be indicated) every second or third night. Maintain heart action with cactin, digitalin or scillitin, or combine the first- and last-named drugs. Begin with a small dose and increase until the desired effect is obtained. We shall be pleased to serve you further.

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QUERY 5528.—"Diabetic Gangrene. Whitney's Reagent. Injection Treatment of Hernia." C. F. A., New York, asks for information in regard to the treatment of

diabetic pains and diabetic gangrene, and the reliability of Whitney's reagent in quantitative estimation of sugar in urine. He also desires the experience of the editor and readers of the journal with the injection method of treating hernia and hemorrhoids. "I wish all who have had experience with these things would 'speak up' and give their experiences or unbiased opinion on them."

For the quick and (to all intents and purposes) accurate, quantitative test for sugar in urine Whitney's reagent is one of the best, if not the best solution. Great care must be taken not to drop it into the suspected specimen too quickly. To obviate any inaccuracy this might cause, a medicine-dropper should be used and the urine should be diluted with a known quantity of water.

Of course if the bottle is left unstoppared the reagent will naturally become inaccurate since part of this accuracy depends upon the ammonia present in the solution and this would naturally evaporate if left to do so. For a quick, accurate test we can recommend nothing better.

In order to *properly* consider the subject of diabetic gangrene, pains of diabetes, etc., it would be necessary to write an extensive article and any modern textbook will give you all the necessary data.

Gangrene may be "dry" or "moist," the term being used to describe a putrefactive necrosis, which may be caused by an injury, (mechanical or chemical) or arrest of circulation in the affected area (thrombus or embolus). Under such conditions saprophytic bacteria invade the parts and destruction progresses rapidly.

Dry gangrene is usually the result of obstruction of an artery and presents on some portion of the body where the collateral circulation is insufficient. We find this form in Raynaud's disease, ergotism, the advanced stage of pellagra, in the very old (occasionally) and, rarely, as a subsequent condition to a primary moist gangrene.

Moist gangrene affects the extremities of the diathetic. It oftens follows the closure of a vessel of any size by neoplasms, cicatrical bands, torsion, etc. Moist gangrene of the lungs develops after thrombosis

or embolism of the pulmonary vessels. In dry gangrene the affected tissues become black and mummified and separation takes place slowly. In moist gangrene the affected area becomes congested, reddish brown, softening takes place, the tissues not infrequently become emphysematous owing to the presence of gas-forming bacteria. An area of inflammation (demarcation line) always separates the gangrenous area from the healthy tissue and there is also a zone of coagulation necrosis varying widely in extent. The gangrenous tissue may liquefy, be cast off *en masse* as a slough or sphacelus, or become encysted. Dry gangrene may supervene and very slow suppuration of the parts result. A fatal toxemia frequently follows.

Diabetic gangrene being especially serious the treatment must of necessity vary according to the conditions present in the particular case under consideration. In diabetic subjects there is obstruction of the smaller vessels. The tibial arteries are especially liable to degenerative changes. In almost all diabetic patients presenting gangrenous conditions we usually find calcareous thickening of the intima of the tibial artery. There may also be more or less cardiac hypertrophy and high pulse tension. The superficial arteries will be hard and twisted.

More men than women suffer from diabetic gangrene, the patient as a rule experiencing cramping pains in the affected limb; a sense of numbness and cold may alternate with heat, formication and a peculiar feeling which is described by the patient as "weight on the foot." Frequently severe cramps occur during the night and the leg becomes bathed in a cold sweat. Later the foot may become insensitive and cold, these symptoms being noted particularly in the morning or after rising from a sitting position. Examination of the limb reveals the skin cold and shriveled, pulsation cannot be detected in the posterior tibial and dorsalis arteries in a large number of cases. The first definite appearance of gangrene will be noted on the large toe; here the skin assumes a peculiar bruised or bluish-red appearance. Later a branly desquamation or even a horny scale may be

noted. Beneath this is an ulcerous area. Blisters containing a foul-smelling or reddish serum next appear. These may break and ulceration become extensive or the superficial ulcers may heal only to break down again in a short period. Occasionally a perforating ulcer is encountered which upon superficial examination appears far from serious, but a careful search will reveal an extensive deep necrosis. By degrees the condition extends to the rest of the toes and foot, its progress being marked by edema.

The line of demarcation may form at the root of the toe across the middle of the foot or at the ankle. In many diabetic patients the gangrenous condition spreads very rapidly. In the earliest stages (before a gangrenous spot has appeared) epsom-salt sponge-baths, massage of the extremity and the exhibition of digitalin, strychnine, cactin and other circulatory stimulants and cardiac tonics will be called for, the limb must be kept warm, scrupulously clean and the patient should be warned not to heat his limbs at the fire or to place them near steam-pipes. Circulation should be maintained by active exercise and wearing of woolen socks. The shoes must be loose and light, and any corns or ingrowing nails should be promptly treated.

Caffeine is unquestionably valuable and some patients are benefited by very small doses of morphine. The writer should use hyoscine, morphine and cactin with pilocarpine and caffeine to effect. As soon as a gangrenous area appears strict surgical cleanliness should be maintained. The affected extremity should be cleansed with an alkaline antiseptic and the part dusted with aristol, bismuth formic iodide or chinosol and be kept elevated and wrapped in cotton. On no account should the foot be heated artificially or be soaked in hot water; neither should ointments be used. Dryness is essential.

Under proper systemic and local treatment the line of demarcation may form and the toe or other area may be removed. In order to secure such results it is absolutely essential that the amount of sugar in the urine be reduced to the minimum. This necessitates

the patient being placed upon a strict diabetic diet. Once the condition spreads to the foot and septic symptoms are noted surgical measures are called for. For technic see any modern work on surgery.

Our method of treating hemorrhoids by injection has been outlined several times. Albright's new book, "Rectal Diseases Treated by Ambulant Method," deals exhaustively with the subject. Success invariably follows intelligent injection of a strong solution of carbolic acid.

The value of the injection method of treating hernia has not yet been definitely settled. The few physicians making a specialty of this treatment seem to succeed in a large proportion of cases but the inexpert operator would be sure to meet with disaster. Special instruments are essential. DePew of Des Moines (originator of the idea) uses a large syringe with a screw plunger which exerts an enormous force, enabling him to inject a specially prepared paraffin at a low temperature. Disasters are usually due to the use of too fluid paraffin.

Those having experience in either line of work are earnestly asked to express their ideas. As the doctor says, "Speak up!"

QUERY 5529.—"Leukoplakia." J. F. L., Missouri, wishes to know what he shall do for a case of leukoplakia, white patches on the buccal mucous membrane of the cheek and tongue. Prognosis? Does it ever degenerate into malignancy?

Leukoplakia is sometimes a serious disease. There is always danger of epithelioma occurring later. You cannot do much better than keep the mouth and buccal mucosa thoroughly cleansed with a solution of oxychlorine or menthol compound. Menthol compound tablet, one; cinnamon water, drams two; water, 12 ounces, makes a useful formula. An antiseptic soap may be used to cleanse the teeth and the gums. A solution of calx iodata (5 grains to the ounce) has given excellent results.

The patches may be entirely removed by applying pure liquor hydrargyri nitratis. The mouth should be stuffed with cotton or other protective and the solution applied to

the lesions with a swab. Allow it to remain for fully fifteen minutes, then neutralize with sodium bicarbonate. Silver nitrate has its advocates and French practitioners apply salicylic acid. We prefer nitrate of mercury or the galvanocautery. If you use the latter cleanse thoroughly with H_2O_2 , boric-acid solution or the cleansing mouth wash mentioned above; then use the galvanocautery. The spots may be subsequently touched with a flat copper electrode attached to the positive pole of the galvanic current; 10 to 15 milliamperes. Keep the electrode moving over the part until it becomes green. It may be necessary to touch the affected area with cocaine first.

Daily applications of pyoktanin blue have been recommended, but the other measures recommended are, we think, more efficacious. Systemic medication must be carefully formulated and with a clear idea of the underlying pathological conditions.

QUERY 5530.—"Acute Pemphigus." P. H. S., Oklahoma, describes a case which he has under treatment in the local hospital and asks if we can come to any conclusion as to the nature and probable cause of the trouble. "Patient is a female, about 35 years of age, weight about 120 pounds, of Swedish descent; dark hair and skin, fairly well nourished, expression dull; has been in the hospital about four months, insane about fifteen months. About three months ago there developed on the thumb of her left hand a large blister which was filled with a dark and very offensive-smelling fluid. The walls were so thin that they were easily broken and stripped off readily, leaving a raw and granular-looking surface. The thumb healed nicely. Her feet look as if thy had been sunburned. This may have been the case, for she sat in the sunshine quite frequently; however, quite a number of other patients who were similarly exposed were not affected as she was. Her appetite is good, she lost no flesh, had occasional diarrhea, but was constipated at times. About a month after her thumb healed a finger on the other hand became affected, also the top of one foot. These blisters also healed readily."

"On last Wednesday, after eating a hearty breakfast, she seemed to lose partially the use of one side and by noon had a temperature of 104°F., which gradually increased in spite of cold baths and cold-pack, until it reached 106°F. We also found a couple of places on the left lower leg which looked like the other blisters, but had been ruptured. Temperature remained 106°F. Thursday another bleb developed on her back covering a surface as large as the palm of the hand; this seemed identical with those on finger and thumb. Temperature remained at 106°F. until some time Friday night, when it began to decrease and a discharge ran from her mouth which had the offensive odor noticed on opening the blisters. Temperature normal since Saturday morning. She is now able to take some nourishment.

"During the time of this high fever the patient had convulsions, but the contractions were so minute that we could only see a twitching about the face; however, by putting the hand on the head of the bedstead we could feel the tremors. Heart action was good, and at no time during the high fever did the pulse run over 80 beats per minute. Since the fever has left her heart action is weaker and more rapid. From Thursday forenoon until the fever began to go down her eyes were drawn downward, pupils dilated and inactive. During convulsions she frothed at the mouth and breathing was shallow and rapid. Bowels and kidneys seemed to act free enough during this time."

This is unquestionably a case of *pemphigus vegetans*—*pemphigoides maligna*. We were at first inclined to look upon it as a pompholyx, but the gravity of the systemic disturbance leads us to give the preference to pemphigus. The buccal lesion is diagnostic, the fluid which ran from the mouth of this patient having its origin, unquestionably, in a ruptured bleb. The extremely unpleasant odor in *pemphigus acutus* has been noted by several authors, and Hyde had under observation four adults exhibiting classical symptoms, one patient, a young woman, dying in a week after the onset of the attack.

You do not describe a "halo" as being present about the lesions. This usually ex-

ists. The febrile process is marked and signs of grave prostration are almost always present. The contents of the blebs are sometimes purulent, occasionally hemorrhagic, more rarely gangrenous. The origin of the disease is questionable, but marked derangement of the body-chemistry invariably exists. An extreme acidosis has been noted. It would be interesting to examine the blood and urine of this patient, and if another attack occurs the contents of a blister should be secured and forwarded to the laboratory for microscopical examination.

Albuminuria usually exists in cases which terminate fatally; indeed a considerable quantity of albumin has been found in the urine of several individuals presenting pemphigus of an acute type. The fever may be continuous, remittent or intermittent. The extremities and trunk are chiefly involved.

You will find a very interesting chapter upon this disease (as also upon pompholyx) in Hyde's new work on "Diseases of the Skin." As pemphigus is a recurrent disease another attack may be expected. The evolution and involution of a single lesion may be accomplished in a few days, but occasionally successive eruptions may extend through weeks or months. One of the peculiarities noted in this case is the low cardiac rate during the period of maximum temperature.

Inmates of asylums—and the insane generally—are, as you may be aware, particularly liable to this and other dermatoses.

Not infrequently they present themselves in anomalous forms and a definite diagnosis is not easily arrived at. Autotoxemia and insanity are, unquestionably, very closely related, and the medical director of a state asylum recently stated to the writer that half the patients in his institution could be materially benefited—if not cured—by the persistent use of the alteratives and eliminants indicated in each particular case. The chemistry of the living body is, unfortunately, complex, and the average physician knows little or nothing about the subject. Naturally his treatment of the "effects" of an unrecognized cause is not likely to be particularly effective.

QUERY 5531.—“Psoriasis. Urethral Hemorrhage.”—F. H. C., Iowa, asks help in the two cases described herewith.

“Case 1. Mrs. S., aged 35, farmer’s wife, mother of three children, youngest one three years old. No history of any sickness since childhood. Alimentary canal clean, appetite and digestion good. Urine tests negative. Came to my office with four finger-nails on one hand black, one-half the way back from the free edge. One of these nails and one on the other hand are rough, black and slightly thickened, and there is a low-grade inflammatory process of the nail-fold of epidermis and the nail-skin; this discoloration had started at the free edge and had gradually worked backward. In all, except the two mentioned above, the nail-fold of the epidermis, the nail-skin, the matrix and the lunula, all seemed healthy and natural. The blackened nails seemed a little more brittle than natural; they grew very slowly, and as far back as the nail was black it seemed loose from its bed. There is no other skin lesion present nor is there any history of such lesion previous.

“I made a diagnosis of scleronychia, and prescribed a thorough soaking of the finger-nails each evening in a strong solution of boric acid, followed at bedtime with ichthyl worked into the skin and between the skin and nails. I also advised her to keep her hands out of water as much as possible. She isn’t improving much. What more can I do for her? Is my diagnosis correct? What is the prognosis?

“Case 2. Mr. W., aged 40. Began, a year ago, passing blood. It is not bloody urine, but pure blood, bright and red. The urine will sometimes follow the blood and sometimes for several times blood clots will pass away with the urine after the pure blood has passed. These attacks at first were several months apart, now they are becoming more frequent. The last two were only two weeks apart. This blood passes without any pain or warning of any kind. He will have a desire to urinate, and then instead of urine blood will pass. In fifteen minutes he may again feel a desire to urinate but pass clear urine. He has never had urethritis or

cystitis. The urine tests show specific gravity 1015, slightly acid, no albumin, no sugar. Prostate gland only slightly enlarged. He is a very strong man and otherwise well. I do not know of a better place to go for help than to yourself.”

In case No. 1 you probably have a psoriatic condition to deal with. Carefully examine the body for confirmatory lesions. In psoriatic affections of the nails the first symptom occurs in the distal portion; in eczematous and also in atrophic diseases changes occur at the root. In the initial stages of psoriasis of the nails the margin of one or more nails becomes loosened, discoloration occurs, and a thin (often necrotic) granular mass will be noted between the nail and the bed. The nail becomes friable and thickened, and in many cases more or less inflammation of the matrix is observed. Yours does not seem to be a case of atrophia unguis.

Onycholysis occurs frequently without recognizable cause although as a rule the patients suffer from some grave neurosis or wasting disease. The nails of one or more fingers become discolored, misshapen and separated from their proximal attachments.

Onychitis must be considered. There may have been an infective or inflammatory condition of the matrix of sufficient intensity to produce the changes described by you.

It would be interesting to have the scrapings from the nails examined. It will be essential to have the urine examined also.

Eliminate, improve nutrition, push the arsenates with nuclein, and soak the ends of the fingers in a carbolated solution of magnesium sulphate (2 ounces to the quart, adding pure carbolic acid, 20 minims). Then apply sulphur ointment, or flowers of sulphur may be dusted into finger cots and placed on the affected fingers.

Hemorrhage from the urethra, especially when red blood follows the urine, is frequently due to rupture of vessels about the orifice of the bladder. Prostatic hypertrophy generally exists. You should examine this patient very carefully, if possible by reflected light. It is possible, of course,

that a calculus exists, but from your description we conjecture that there is a marked congestion with possible erosion of the vesical neck. Injections of hamamelis and the free administration of arbutin, hamamelis, and collinsonia suggest themselves. Oil of erigeron may also be given in small doses.

We should very much like to have a specimen of this patient's urine. And a succinct description of rectal, vesical, urethral and prostatic conditions as revealed by a thorough local examination. Be extremely careful when inserting instruments, take every precaution to secure—and maintain—asepsis. Is there any possibility of venereal, tubercular or cancerous taint? Have any sounds or instruments been used? Does the man complain of any pain in the renal, vesical or perineal region?

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QUERY 5532.—“Papular Eruption During Menstrual Period.” W. H. R., Ontario, asks us to outline treatment for the skin eruption which appears at the menstrual period in so many women; just small rough papules, showing very little inflammation, and appearing mostly on the face over the cheek-bones, especially before menstruation, and generally clearing up shortly after the flow commences. In many cases, however, this eruption does not disappear quickly, but has scarcely vanished when the next attack begins. There seems to be absolutely no abnormality in the menstrual period in the majority of cases aside from this unsightly facial rash.

This is an extremely interesting subject and one, moreover, which merits more attention from the “family doctor.” Some women suffer intense mortification from these “periodical acnes.”

A course of hepatic alteratives and eliminants, with perhaps, a circulatory equilibrant for a short period prior to the menstrual period usually controls the milder forms of eruption mentioned. Such patients may advantageously receive iridin, alnuin and juglandin three or four times daily for two weeks preceding the catamenia. Sulphur and podophyllin in 1-6-grain doses after dinner and supper often prove effective. A

morning laxative saline draft for a week before the period is almost essential and must not be neglected.

Ovarian and uterine congestion, if a feature, must be corrected, while a sluggish circulation is to be improved by the use of strychnine, cactus, digitalin, etc. Attend carefully to the digestion and, in all cases, examine the urine for hyperacidity, insufficient urea, and for indican.

Have the skin washed with carbenzol or similar antiseptic soap; instruct the patient to “dab” it dry, not to use friction or a very rough towel; the soap should be used only once a day. At night the skin may be “dry-cleaned” with almond meal. Many of the toilet-creams on the market are harmful.

The causes of acne are numerous and often extremely obscure. Those who insist upon its parasitic origin insist that the soil must be favorable before the bacteria will invade the individual. Certain systemic conditions favor follicular disorder, and it is not at all difficult to imagine abnormal secretions as affording desirable culture-media for bacilli. Acne, as we know, troubles the cachetic or plethoric; so, also, dyspeptic or constipated people are prone to suffer from it in some form, while at the approach of puberty, when the system is undergoing a profound change, this eruption nearly always makes its appearance. Women whose faces ordinarily are “free from pimples” are annoyed by their appearance every recurrent month, their general health meanwhile being perfect.

The menstrual type of acne may be either a reflex neurosis or a manifestation of a periodical toxemia. Latent congestion of the follicles probably exists, the change in the circulation and body-chemistry occurring at the catamenial period accentuating the condition. Pus-forming cocci may or may not invade the lesion; where a few papules appear, fade and die away, treatment must of necessity be systemic; if, however, there is retention of sebum and debris with pus formation, local and constitutional medication should be instituted; the latter in most instances to be continued for some time.